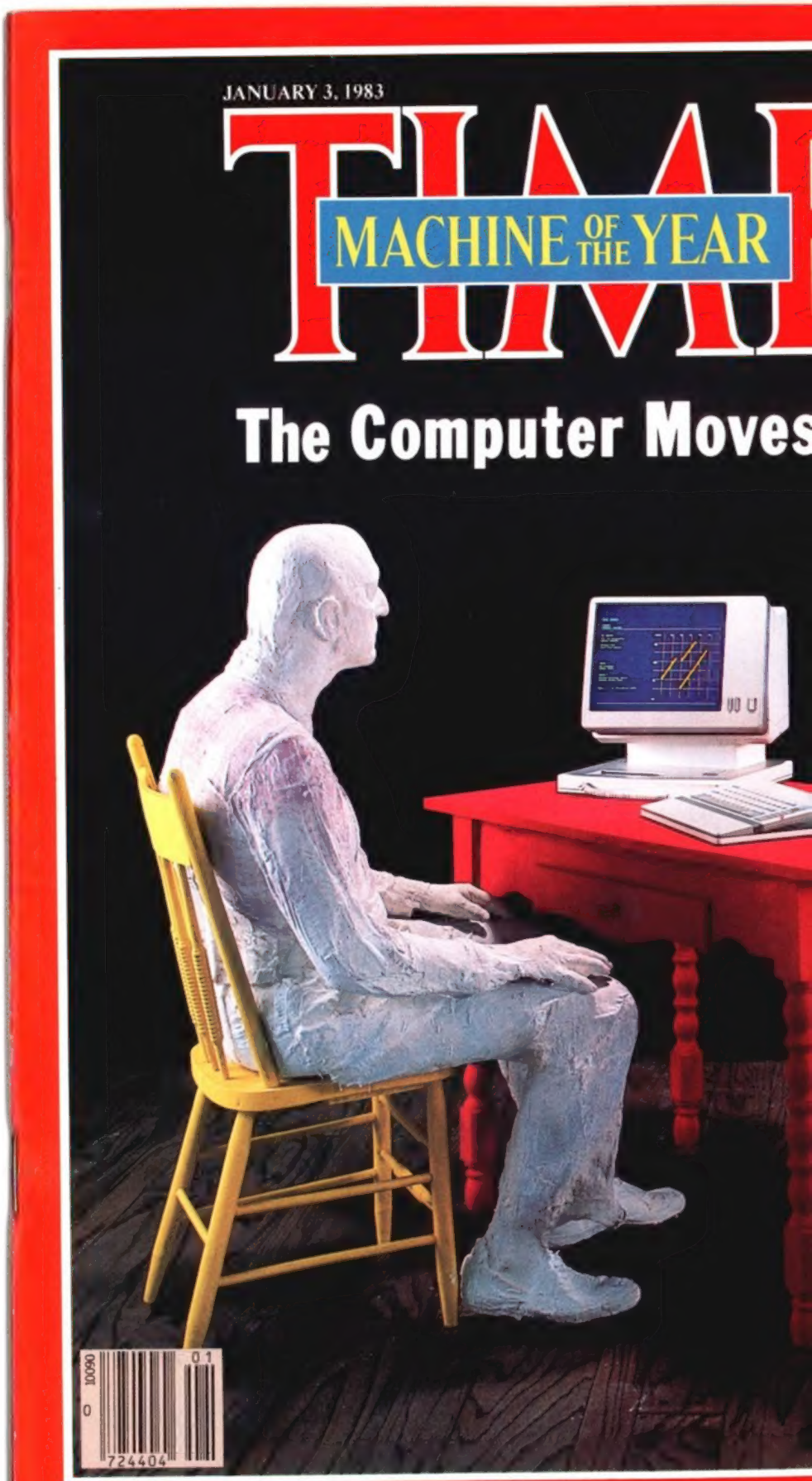
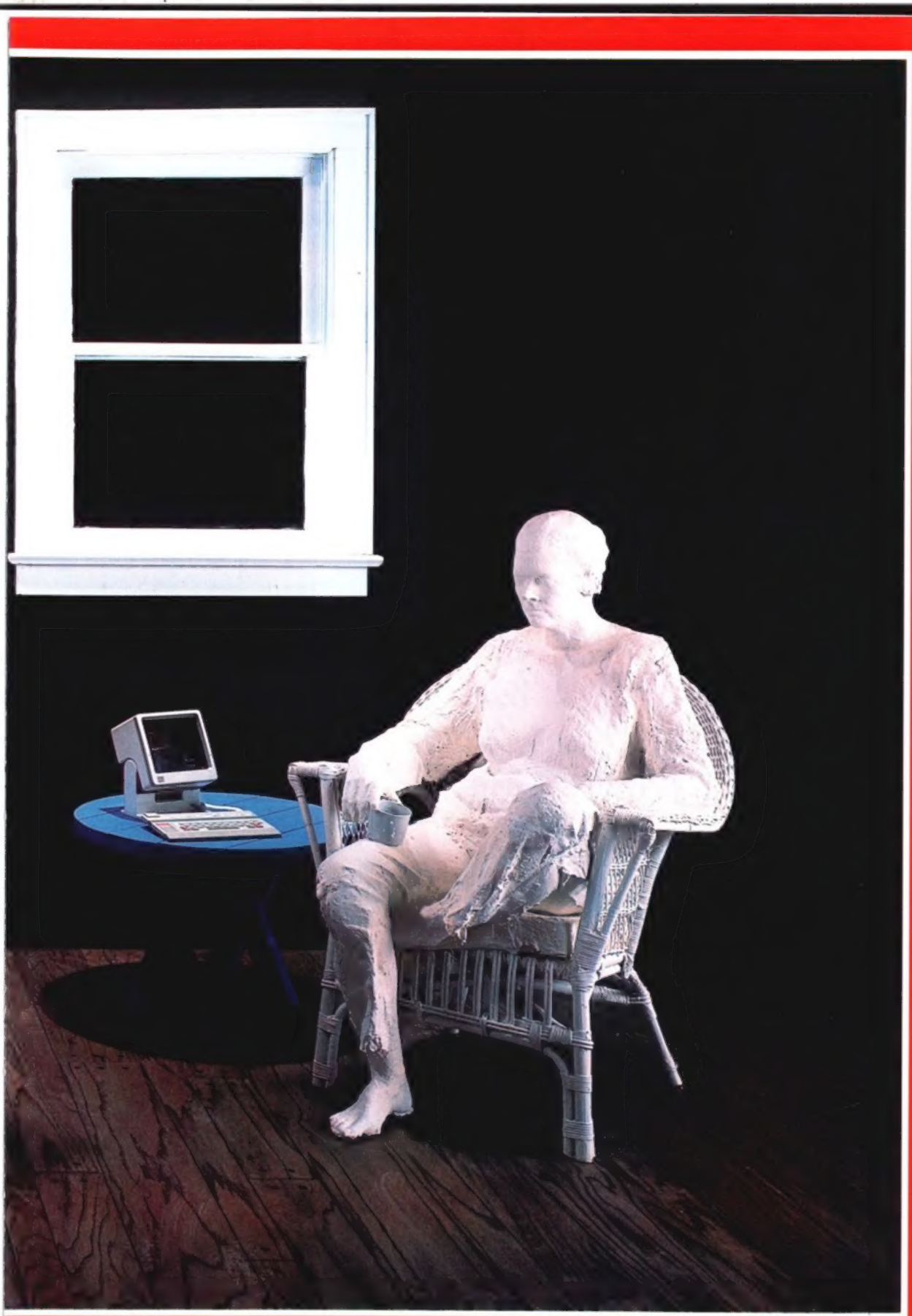

JANUARY 3, 1983
TIME
MACHINE OF THE YEAR
The Computer Moves



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JANUARY 3, 1983 Vol. 121 No. 1

TIME

THE WEEKLY NEWSMAGAZINE

ROBERTO BROSAN

Hoglund, left, and George Segal with new friends

A Letter from the Publisher

For the past 55 years, TIME's Man of the Year covers have depicted real individuals or, on four occasions, a symbolic representation of a group of people: G.I. Joe (1950), the Hungarian Patriot (1956), the Young (1966) and Middle Americans (1969). Several human candidates might have represented 1982, but none symbolized the past year more richly, or will be viewed by history as more significant, than a machine: the computer.

Throughout 1982, TIME chronicled the computer revolution, both by devoting three covers to it and by introducing in April a new Computers section. Says Senior Writer Frederic Golden, who contributed to this week's cover stories: "Computers were once regarded as distant, ominous abstractions, like Big Brother. In 1982 they truly became personalized, brought down to scale, so that people could hold, prod and play with them." Golden often writes his own stories at home on a TRS-80 Model III; another cover contributor, Computers Section Writer Philip Faflick, works on an Apple II Plus in his apartment. Indeed, by October 1983, the entire TIME editorial operation will be using the latest generation of word processors.

In search of a memorable depiction of the irresistible invasion of computers into American homes, Art Director Rudy Hoglund approached George Segal, the world-famous sculptor. Segal almost never accepts commercial commissions, but Hoglund thought Segal's "stark and dramatic settings, in which the eye is drawn to objects," were perfectly suited to the first Machine of the Year. Segal enthusiastically agreed. Hoglund went to Richardson/Smith, a design firm in Columbus, to create the mock computers portrayed on the cover.

For all that computers have achieved, they can still prove frustrating. In April, Golden's machine inexplicably swallowed the cover story he had written on the Computer Generation. San Francisco Correspondent Michael Moritz, part of a special reporting team that included New York Bureau Chief Peter Stoler and Chicago Correspondent J. Madeleine Nash, briefly lost touch with New York when his telephone computer link malfunctioned. Says Contributor Jay Cocks, who anxiously awaited Moritz's report: "They told me that his computer was down. I envisioned an old hippie having a fit of depression." Meanwhile, Senior Writer Otto Friedrich resolutely tapped out his Machine of the Year story on his favorite machine of all: a 15-year-old Royal 440.

John A. Meyer

Index

12
Machine of the Year: A new world beckons, created by a technological upheaval that is bringing computers to millions. Since no one person dominated this process, TIME's Man of the Year for 1982 is not a man but the computer itself.

25
Micro Maestros: Meet some seers and salesmen behind the revolution, from a boyish centimillionaire, to an IBM man who has shaken up the sluggish giant, to a feisty survivor of Auschwitz.

30
Hacker's Guide: Along with a history of the computer revolution, here is a guide to how software works, the bestselling hardware and the baffling lingo used by hackers (computer fanatics).

40
Runners-Up: Israel's stubborn Prime Minister, the Iron Lady who put the "Great" back in Britain, the Fed's inflation fighter and a little friend from outer space.

42
Nation
Lame ducks pass a gas tax. ▸ Corruption is probed in Boston. ▸ Raising the drinking age. ▸ Murder in Amish country.

54
World
Rome points an angry finger at Bulgaria. ▸ Andropov makes an offer. ▸ King Hussein says, "Not yet." ▸ Polish portraits.

66
Economy & Business
Will the 1982 bond rally fizzle? ▸ OPEC fails to set production quotas. ▸ Sherry Lansing quits as president of 20th Century-Fox.

72
Sport
On the sure foot of an old-fashioned field-goal kicker, Mark Moseley, swings the mood of the nation's capital.

75
Show Business
The French movie business is enjoying a robust boom. ▸ High and low marks for best and worst in the year's most.

76
Design
High-priced celebrity chic made inroads in 1982, but the year's best upheld the practical, the economical and the beautiful.

78
Theater
Extremities, a melodrama about rape, has the menace of a hand grenade with its pin pulled. ▸ The best plays of the year.

80
Music
Arthur Rubinstein, one of the century's greatest pianists, dies at 95. ▸ The best of 1982's pop and classical discs.

82
Cinema
The Dark Crystal: the Muppets invade Middle-earth. ▸ *Six Weeks:* Dudley Moore in a dry-eyed weepie. ▸ 1982's best.

87
Books
On the Black Hill, a novel of identical twins and rare insight; *Shiloh and Other Stories*. ▸ The best books of the year.

90
Video
Sony's new Watchman makes TV a moveable minifeast. ▸ The year's best, from *Life on Earth* to Donkey Kong.

8 Letters
71 People
88 Milestones

Cover: Sculpture by George Segal; Computer by Richardson/Smith Design
Photograph by Roberto Brosan

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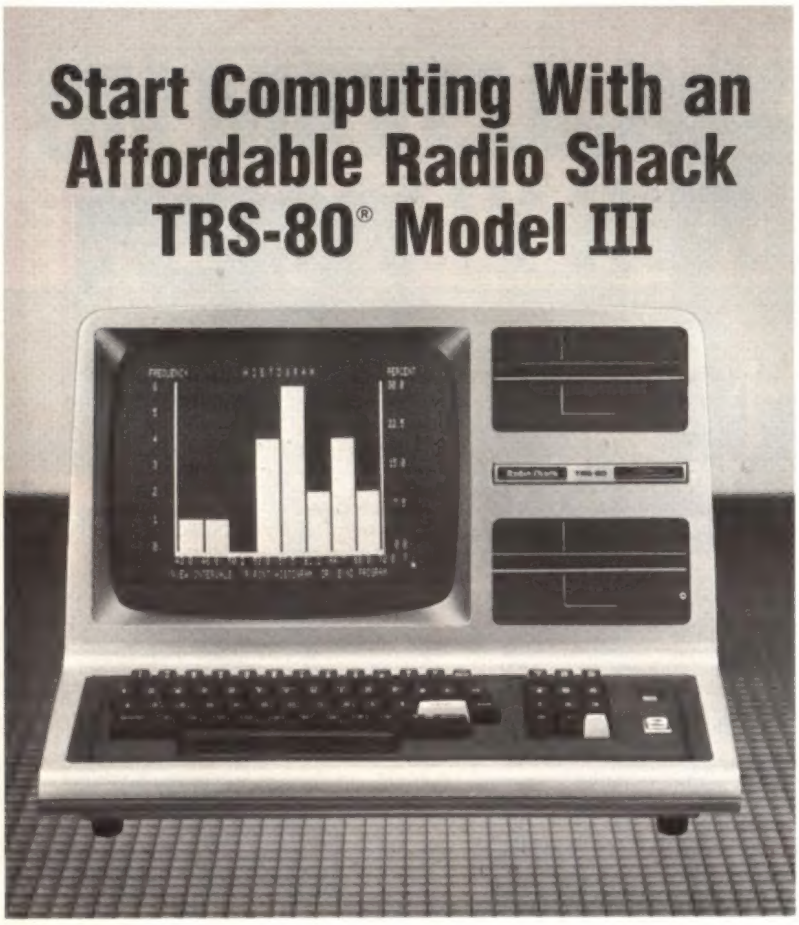

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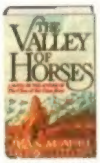

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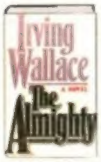

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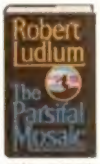

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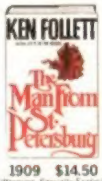

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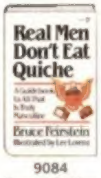

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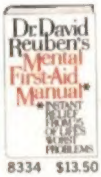

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Letters

Reagan's Rule

To the Editors:

Ronald Reagan is no more a great communicator [Dec. 13] than a speech is a conversation. Communication is a two-way street. Although the President may be a persuasive speaker, he does not like to listen. Once his mind is made up, he hears only what he wants to hear.

Norman E. Tandy
Winchester, N.H.

The picture of our President presented in your article "How Reagan Decides" is scary. I wonder if our country can afford two more years of governing by such an inflexible man.

John Moffitt
Unionville, Va.

Contrary to the statement by one of his aides that the President "is an optimist," I say that Reagan does not come close to fitting this description. The President fears that an enemy will subdue the country or blow us up. As a result, he insists that we join him in this all-consuming dread. He could not possibly be considered an optimist.

Edwin W. Butler
Waldport, Ore.

All our modern Presidents lived through World War II. Consequently, they have been conditioned to fight anywhere, any time. Perhaps the next generation will lift from us this burden of policing the world.

Lee Wakefield
San Francisco

Many citizens count the President's policies as the last hope for economic stability in the U.S. and are thankful that he is stubborn.

George E. Bagwell III
Montgomery, Ala.

You say Ronald Reagan is inflexible. I say that he shows firmness of purpose, and I welcome the quality, which was so lacking in his predecessor. The President has every reason to be optimistic. Because of his policies, I no longer have to brace myself whenever I go into a store against the soaring prices caused by inflation. In addition, you note that the President ignores the advice of his subordinates. We elected Reagan, not his aides.

Alcestis Oberg
Dickinson, Texas

I disagree with your article "Job Specs for the Oval Office," in which you say that Governors are qualified to handle the presidency. Governors have no experience in foreign or military affairs. Reagan never had to worry about being attacked by Nevada. A Governor may handle the economy of his state brilliantly, but he does not have to pay for tanks, missiles and bombers. Only Senators and Congressmen deal with the many issues a President has to face.

Douglas Robert Barry
Lutherville, Md.

Has the "quality of the incumbents fallen off," as your piece asserts, or do officeholders just look worse because of television? No one can emerge from such scrutiny without appearing as human as the rest of us, not even a George Washington or an Abraham Lincoln.

David A. Robinson
Springfield, Mass.

Your analysis of the job specifications for the presidency stopped short of detailing what can be done to improve the caliber of candidates. I believe that a diminution of the open competition in American politics has been a major contributor to the selection of poorer candidates, and therefore less qualified elected officials. For the 1988 election, a list should be drawn up of 200 of the most promising leaders. Then an advisory review board, similar to the American Bar Association, would rate the individuals. Mediocre candidates would be discouraged. Excellent ones would be encouraged to get into races. This system would focus on who ought to be President rather than who has the best chance to win.

John C. Armor
Washington, D.C.

I disagree with your assessment that John Kennedy was not a great President because "his accomplishments were meager." If that is the criterion, then Thomas Jefferson, whose only significant achievement was the Louisiana Purchase, would not qualify for greatness.

Robert J. Quirk, Mayor
Cuyahoga Falls, Ohio

We look to our President for peace, prosperity and freedom. We do not want our way of life jeopardized by risky foreign policies, economic experimentation and fiscal destabilization. Thus the job specifications for the Oval Office do not call for the election of the perfect administrator. The position can be filled only by someone who can pull us together to correct a bad situation.

Richard C. Hannibal
York, Pa.

Kennedy Dropout

Four more years of Ronald Reagan, or possibly Fritz Mondale or John Glenn? We will need Ted Kennedy [Dec. 13] in 1988 to save this country.

Greg W. Prindle
Toledo

Senator Kennedy has finally done something good for his country.

Lewis E. Walberg
Haverhill, Mass.

Gay Benefits

Gay families should receive the same rights as those allowed to traditional families [Dec. 13]. Since gays are among the taxpayers and consumers who pay for such benefits, they should have a share in them.

Flinn Hudson
Cedar Falls, Iowa

Every one of us, straight or gay, came from a union of male and female. To pretend that the basis for marriage or the family structure is anything but that is intellectually dishonest. We should not allow ourselves to be intimidated into passing legislation to accommodate these self-styled martyrs and misfits.

Carol Bachelder
Boise, Idaho

Patricide

Richard Jahnke severely beat his children Deborah and Richard for minor infractions [Dec. 13]. Thus it is not surprising that the children killed their father. Deborah and Richard were reacting in the only way they knew, with violence. This situation was criminal before the murder ever took place.

Rosalie Lemberger
Paramus, N.J.

Richard and Deborah Jahnke should not be prosecuted; they should be hired as consultants on child abuse. We are misguided by the notion that children have to be all but killed before they should be removed from the home.

Michael Hagan
Milwaukee

The Jahnke children committed a heinous crime and must suffer the consequences of their actions. If they do not, they may try to solve more of life's problems in the same manner.

Kris Quail
Rochester, Mich.

Hertz introduces free gifts worth getting.

Now when you rent from Hertz, you can get the kind of top quality gifts you'd expect from #1. Like leather accessories from Cartier. And only Hertz gives you so many different gifts to choose from.

1 Rental

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Or you can continue to save coupons given to you with each rental and redeem them for bigger gifts.

2 Rentals

Choose either a Cartier leather billfold, Wilson basketball, sports bag, Magnavox AM/FM radio, foldaway luggage carrier, 40 piece tool set, or Givenchy umbrella.

3 Rentals

Choose either a Wilson soccerball, Emerson AM/FM portable radio, Pierre Cardin travel alarm clock, Reed & Barton silver-plated picture frame, Windsor AM/FM stereo receiver with headphone, or Fashion Club shoulder bag.

4 Rentals

Choose either a Cartier leather passport holder, Spalding racquetball set, Emerson AM/FM digital clock radio, Emerson portable cassette recorder, Kodak Tele-Stylelite camera, or Fashion Club overnight bag.

5 Rentals

Choose either a Canon printing calculator, sports binoculars, AM/FM stereo cassette player with headphone, set of 4 Svend Jensen crystal beer mugs, GTE Solitare™ IV telephone with auto dial call back, or Fashion Club weekend bag.

6 Rentals

Choose either a Cartier leather and suede portfolio, 12" B&W RCA TV set, inflatable 2 man boat, Ansco 35mm camera, men's attaché briefcase, men's or women's Citizen date watch, or Fashion Club carryon garment bag.

For complete details, call Hertz at 1-800-654-3131 or call your travel consultant. Available on rentals from January 1 through March 31, 1983 at all U.S. corporate airport, major downtown and participating licensee locations, for all compact or larger car classes. Not available on tour packages or special promotional rates.

#1 For Everyone.™

Hertz rents Fords and other fine cars.

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Letters

Australian Intrigue

Your article "Many Questions, Few Answers" [Dec. 13] reviews old allegations, often by anonymous sources, about CIA involvement in Australian domestic politics and particularly in the affairs of the defunct Nugan-Hand Merchant Bank. You correctly assert that the case set out by James A. Nathan in *Foreign Policy* magazine "is long on speculation and short on evidence." Vice President George Bush, former director of the CIA, specifically confirmed during his recent visit to Australia that there had been no CIA involvement. Former Senator Frank Church has stated unequivocally that his Select Committee on Intelligence, which investigated the matter, uncovered no evidence implicating the CIA. By continually reviving these unsubstantiated allegations, we are ill-serving our special relationship with valued allies.

John H. Holdridge
Assistant Secretary of State
Washington, D.C.

Countering Arbatov

In trying to portray America as an enemy of the Soviet Union, Georgi Arbatov [Dec. 6] can think of nothing better than to drag out the feeble and ineffective American Expeditionary Force that was sent to Russia in 1918. These troops were soon withdrawn. What Arbatov forgets is how we helped the U.S.S.R. survive in World War II. As a reward we received only Stalin's lies, treachery and broken agreements, which are exemplified by the seizure of Poland and Czechoslovakia.

David E. Renshaw
Pittsburgh

Rain, Rain, Go Away

Acid rain is a serious and expensive problem to resolve [Dec. 6]. Yet one solution, nuclear power, is not even mentioned in your article. Until the antinuclear lobby came along, nuclear energy was well on its way to reducing air pollution. Is it possible that in the final analysis nuclear power offers the lowest hazard to our environment and possibly even to genes?

Harry Wetzel
Chairman of the Board
Garrett Corp.
Los Angeles

Utilities balk at the cost of cutting emissions. They should be reminded that the air is more than a convenient, low-cost dump site for their garbage. A spring rain is now a sobering reminder that our lakes and rivers are receiving yet another lethal dose of water.

Garry L. Finnestad
Maple Grove, Minn.

Namibian Pullout

In the article "Troubled Talks" [Dec. 6], which describes the current negotiations over the independence of Namibia, you state that "the South Africans appear to have fashioned a stalling tactic" by insisting that the Cuban troops in Angola are to withdraw on a schedule comparable to the pullout of South African troops from Namibia. Is it unreasonable for the South Africans to demand a withdrawal of Cuban troops from Angola while offering to remove their own from Namibia? Any other approach would ensure that no permanent peace could come about.

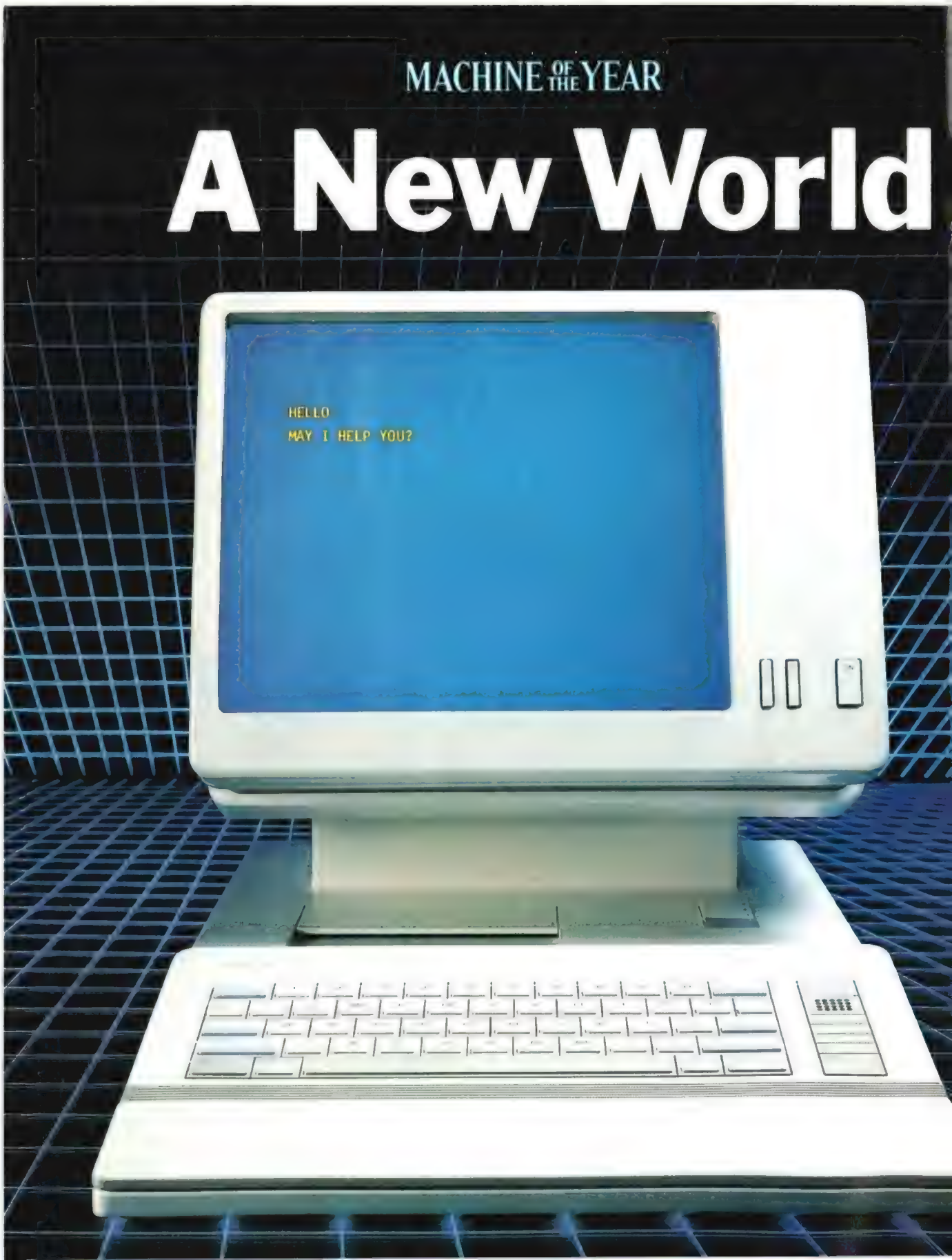
Marion H. Smoak
Shipley Smoak & Henry
Legal Advisers to the
Government of Namibia
Washington, D.C.

LETTERS TO THE EDITOR should be addressed to TIME, Time & Life Building, Rockefeller Center, New York, N.Y. 10020, and should include the writer's full name, address and home telephone. Letters may be edited for purposes of clarity or space.

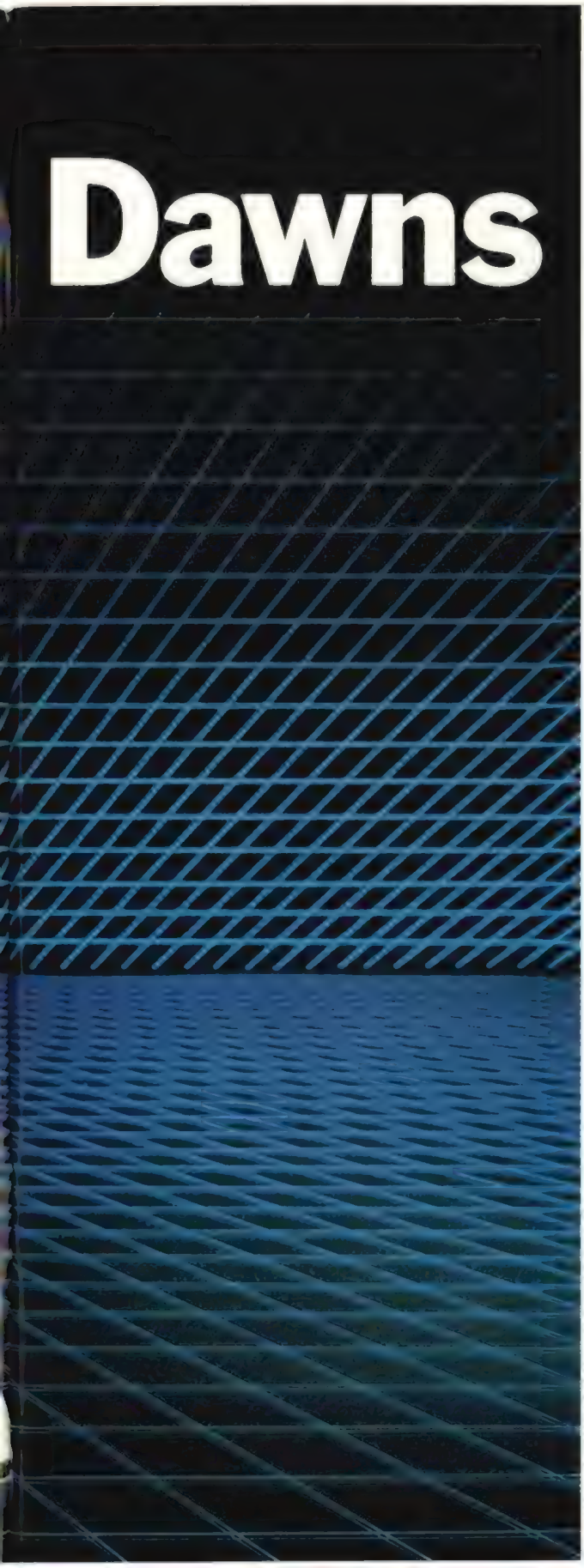
Warning: The Surgeon General Has Determined That Cigarette Smoking Is Dangerous to Your Health.
Kent III Kings: 2 mg. "tar", 0.3 mg. nicotine; Kent Kings: 13 mg. "tar", 1.0 mg. nicotine, av per cigarette, FTC Report, December 1981.
Kent
When you know what counts.
KENT
III
ULTRA LOW TAR
KENT
Low tar
Ultra low tar
Experience taste you can count on.

MACHINE OF THE YEAR

A New World



Dawns



Ever see one of these before, mister? Yes, you. I'm talking to you, ma'am. Ever work one of these Commodores or Timex Sinclairs or Osborne 1s or TRS-80 IIIs? How do you like them Apples? Just a joke, son. Good, clean fun. But you look so skeptical, like you're from Missouri, and I want to sell you one of these beauties, 'cause you need it and 'cause you want it, no matter what you say. Deep in your all-American heart (you *are* American, aren't you, pal?), you crave this little honey, which will count for you and store for you and talk for you, and one day it might even kiss for you (no offense, miss). Point is, it will save you time. Time time time. And we need all the time we can save. Can't kill time without injuring eternity. Thoreau said that. Great American, Thoreau.

You say: Why should I want to save time? I hear you, friend. I hear you. You wonder where it gets you, saving all that time, when you think about old Henry Ford's gizmo that was supposed to save a peck of time. Only instead of conquering the open road, we wound up living on it. You've got a point. You a college boy? But this is the country of the A-bomb and the zipper. We always save time, good and bad. *Tempus fugit.* Time is money. Most of all, time is dreams. And computers give you time for dreams.

This sweetheart here, this little baby, looks like any ordinary machine, isn't that so? A mess of screws and buttons, a whole heap of plastic. Comes with new words too: RAMS and ROMS. Think that's what the machine is made of, do you—the hardware and the software and the mouse? Not a chance. The computer is made of *you*, lady. It's got you all inside it. You wished it here. No, not to do your taxes or to teach you German or to whip you in Pac-Man four out of five. You wished it here because the country was running low on dream time. Which provides *equal time.* I'm talking social equality. I'm talking freedom with a capital F, like when the railroad first rolled in 150 years ago, roaring and puffing over the countryside, scaring the chickens and the cows, but offering everyone a ride all the same, that's everyone, I say, giving the Republic to the people. Just like the computer.

Now I'll tell you something about machines in American history. No, don't walk away; won't take half a minute. We may have turned into what looks like a nation of doohickeys, but that isn't what we had in mind at the start. What our forefathers (bless 'em) wanted was the land, not machines, the great, wide, beautiful land that was thought to go on forever. When the machines came clanging along, they were supposed to let folks enjoy the land more, the green grass and the blue water. Only they got out of hand, you see, until all the lovely forever greens and blues got squeezed in a corner full of national parks and the sky choked black with factories. That isn't what we intended, though. Machines were meant to open the territory, not close it down.

What's all this got to do with computers? you ask. I'll tell you. They reopen the territory, that's what they do. Oh, not the land, of course. That's gone like the topsoil, with the wind. But the land was never our real territory anyway. It was the dream, my friends; the territory was always the New World ideal. We don't ever want to run out of that, do we? Goodbye land. Hello space. Can't you picture all those moons and stars, smiling and winking and waiting for a visit? Howdy, Mr. Jupiter. Inventions arise when they're needed. This here screen and keyboard might have come along any old decade, but it happened to pop up when it did, right now, at this point in time, like the politicians call it, because we were getting hungry to be ourselves again. That's what I think, buddy. "The most idealist nations invent most machines." D.H. Lawrence said that. Great American, D.H.

O pioneer. Folks over in Europe have spent an awful lot of time, more than 200 years if you're counting, getting up on their high Lipizzaners and calling us a nation of gears and wheels. But we know better. What do you say? Are you ready to join your fellow countrymen (4 million Americans can't be wrong) and take home some bytes of free time, time to sit back after all the word processing and inventorying and dream the dear old dream? Stand with me here. The sun rises in the West. Play it, Mr. Dvořák. There's a New World coming again, looming on the desktop. Oh, say, can you see it? Major credit cards accepted.

—By Roger Rosenblatt

TIME, JANUARY 3, 1983

The Computer Moves In

By the millions, it is beeping its way into offices, schools and homes

WILL SOMEONE PLEASE TELL ME, the bright red advertisement asks in mock irritation, WHAT A PERSONAL COMPUTER CAN DO? The ad provides not merely an answer, but 100 of them. A personal computer, it says, can send letters at the speed of light, diagnose a sick poodle, custom-tailor an insurance program in minutes, test recipes for beer. Testimonials abound. Michael Lamb of Tucson figured out how a personal computer could monitor anesthesia during surgery; the rock group Earth, Wind and Fire uses one to explode smoke bombs onstage during concerts; the Rev. Ron Jaenisch of Sunnyvale, Calif., programmed his machine so it can recite an entire wedding ceremony.

In the cavernous Las Vegas Convention Center a month ago, more than 1,000 computer companies large and small were showing off their wares, their floppy discs and disc drives, joy sticks and modems, to a mob of some 50,000 buyers, middlemen and assorted technology buffs. Look! Here is Hewlett-Packard's HP9000, on which you can sketch a new airplane, say, and immediately see the results in 3-D through holograph imaging; here is how the Votan can answer and act on a telephone call in the middle of the night from a salesman on the other side of the country; here is the Olivetti M20 that entertains bystanders by drawing garishly colored pictures of Marilyn Monroe; here is a program designed by The Alien Group that enables an Atari computer to say aloud anything typed on its keyboard in any language. It also sings, in a buzzing humanoid voice, *Amazing Grace* and *When I'm 64* or anything else that anyone wants to teach it.

As both the Apple Computer advertisement and the Las Vegas circus indicate, the enduring American love affairs with the automobile and the television set are now being transformed into a giddy passion for the personal computer. This passion is partly fad, partly a sense of how life could be made better, partly a gigantic sales campaign. Above all, it is the end result of a technological revolution that has been in the making for four decades and is now, quite literally, hitting home.

Americans are receptive to the revolution and optimistic about its impact. A new poll* for TIME by Yankelovich, Skelly and White indicates that nearly 80% of Americans expect that in the fairly near future, home computers will be as commonplace as television sets or dishwashers. Although they see dangers of unemployment and dehumanization, solid majorities feel that the computer revolution will ultimately raise production and therefore living standards (67%), and that it will improve the quality of their children's education (68%).

The sales figures are awesome and will become more so. In 1980 some two dozen firms sold 724,000 personal computers for $1.8 billion. The following year 20 more companies joined the stampede, including giant IBM, and sales doubled to 1.4 million units at just under $3 billion. When the final figures are in for 1982, according to Dataquest, a California research firm, more than 100 companies will probably have sold 2.8 million units for $4.9 billion.

To be sure, the big, complex, costly "mainframe" computer has been playing an increasingly important role in practically everyone's life for the past quarter-century. It predicts the weather, processes checks, scrutinizes tax returns, guides intercontinental missiles and performs innumerable other operations for governments and corporations. The computer has made possible the exploration of space. It has changed the way wars are fought, as the Exocet missile proved in the South Atlantic and Israel's electronically sophisticated forces did in Lebanon.

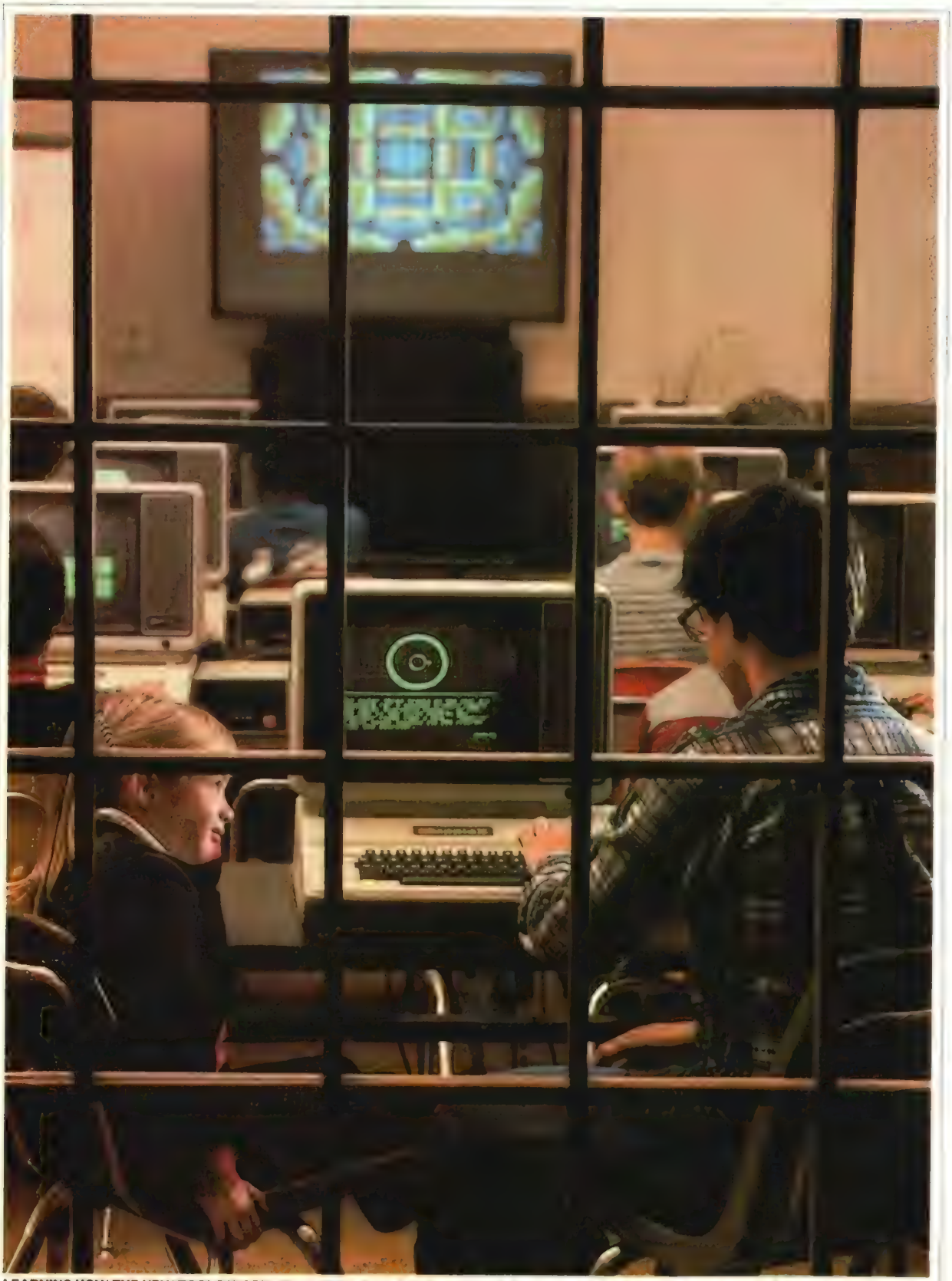
Despite its size, however, the mainframe does its work all but invisibly, behind the closed doors of a special, climate-controlled room. Now, thanks to the transistor and the silicon chip, the computer has been reduced so dramatically in both bulk and price that it is accessible to millions. In 1982 a cascade of computers beeped and blipped their way into the American office, the American school, the American home. The "information revolution" that futurists have long predicted has arrived, bringing with it the promise of dramatic changes in the way people live and work, perhaps even in the way they think. America will never be the same.

In a larger perspective, the entire world will never be the same. The industrialized nations of the West are already scrambling to computerize (1982 sales: 435,000 in Japan, 392,000 in Western Europe). The effect of the machines on the Third World is more uncertain. Some experts argue that computers will, if anything, widen the gap between haves and have-nots. But the prophets of high technology believe the computer is so cheap and so powerful that it could enable underdeveloped nations to bypass the whole industrial revolution. While robot factories could fill the need for manufactured goods, the microprocessor would create myriad new industries, and an international computer network could bring important agricultural and medical information to even the most remote villages. "What networks of railroads, highways and canals were in another age, networks of telecommunications, information and computerization . . . are today," says Austrian Chancellor Bruno Kreisky. Says French Editor Jean-Jacques Servan-Schreiber, who believes that the computer's teaching capability can conquer the Third World's illiteracy and even its tradition of high birth rates: "It is the source of new life that has been delivered to us."

The year 1982 was filled with notable events around the globe. It was a year in which death finally pried loose Leonid Brezhnev's frozen grip on the Soviet Union, and Yuri Andropov, the cold-eyed ex-chief of the KGB, took command. It was a year in which Israel's truculent Prime Minister Menachem Begin completely redrew the power map of the Middle East by invading neighboring Lebanon and smashing the Palestinian guerrilla forces there. The military campaign was a success, but all the world looked with dismay at the thunder of Israeli bombs on Beirut's civilians and at the massacres in the Palestinian refugee camps. It was a year in which Argentina tested the decline of European power by seizing the Falkland Islands, only to see Britain, led by doughty Margaret Thatcher, meet the test by taking them back again.

Nor did all of the year's major news derive from wars or the threat of international violence. Even as Ronald Reagan cheered the sharpest decline in the U.S. inflation rate in ten years, 1982 brought the worst unemployment since the Great Depression (12 million jobless) as well as budget deficits that may reach an unprecedented $180 billion in fiscal 1983. High unemployment plagued Western Europe as well, and the multibillion-dollar debts of more than two dozen nations gave international financiers a severe fright. It was also a year in which the first artificial heart began pumping life inside a dying man's chest, a year in which millions cheered the birth of cherubic Prince William Arthur Philip Louis of Britain, and millions more

*The telephone survey of 1,019 registered voters was conducted on Dec. 8 and 9. The margin of sampling error is plus or minus 3%.



LEARNING HOW THE NEW TOOLS WORK: Nicole Thibodeau, 6, left, and Scott Sussman, 16, work together on an Apple II during a marathon six-hour training session run by the Computer Learning Center in a shopping center in the Minneapolis suburb of Golden Valley, Minn.

rooted for a wrinkled, turtle-like figure struggling to find its way home to outer space.

There are some occasions, though, when the most significant force in a year's news is not a single individual but a process, and a widespread recognition by a whole society that this process is changing the course of all other processes. That is why, after weighing the ebb and flow of events around the world, TIME has decided that 1982 is the year of the computer. It would have been possible to single out as Man of the Year one of the engineers or entrepreneurs who masterminded this technological revolution, but no one person has clearly dominated those turbulent events. More important, such a selection would obscure the main point. TIME's Man of the Year for 1982, the greatest influence for good or evil, is not a man at all. It is a machine: the computer.

It is easy enough to look at the world around us and conclude that the computer has not changed things all that drastically. But one can conclude from similar observations that the earth is flat, and that the sun circles it every 24 hours. Although everything seems much the same from one day to the next, changes under the surface of life's routines are actually occurring at almost unimaginable speed. Just 100 years ago, parts of New York City were lighted for the first time by a strange new force called electricity; just 100 years ago, the German Engineer Gottlieb Daimler began building a gasoline-fueled internal combustion engine (three more years passed before he fitted it to a bicycle). So it is with the computer.

The first fully electronic digital computer built in the U.S. dates back only to the end of World War II. Created at the University of Pennsylvania, ENIAC weighed 30 tons and contained 18,000 vacuum tubes, which failed at an average of one every seven minutes. The arrival of the transistor and the miniaturized circuit in the 1950s made it possible to reduce a room-size computer to a silicon chip the size of a pea. And prices kept dropping. In contrast to the $487,000 paid for ENIAC, a top IBM personal computer today costs about $4,000, and some discounters offer a basic Timex-Sinclair 1000 for $77.95. One computer expert illustrates the trend by estimating that if the automobile business had developed like the computer business, a Rolls-Royce would now cost $2.75 and run 3 million miles on a gallon of gas.

Looking ahead, the computer industry sees pure gold. There are 83 million U.S. homes with TV sets, 54 million white-collar workers, 26 million professionals, 4 million small businesses. Computer salesmen are hungrily eyeing every one of them. Estimates for the number of personal computers in use by the end of the century run as high as 80 million. Then there are all the auxiliary industries: desks to hold computers, luggage to carry them, cleansers to polish them. "The surface is barely scratched," says Ulric Weil, an analyst for Morgan Stanley.

Beyond the computer hardware lies the virtually limitless market for software, all those prerecorded programs that tell the willing but mindless computer what to do. These discs and cassettes range from John Wiley & Sons' investment analysis program for $59.95 (some run as high as $5,000) to Control Data's PLATO programs that teach Spanish or physics ($45 for the first lesson, $35 for succeeding ones) to a profusion of space wars, treasure hunts and other electronic games.

This most visible aspect of the computer revolution, the video game, is its least significant. But even if the buzz and clang of the arcades is largely a teen-age fad, doomed to go the way of Rubik's Cube and the Hula Hoop, it is nonetheless a remarkable phenomenon. About 20 corporations are selling some 250 different game cas-

ANALYZING BUSINESS DATA: Transamerica Executive Frank Herringer studies print-outs

settes for roughly $2 billion this year. According to some estimates, more than half of all the personal computers bought for home use are devoted mainly to games.

Computer enthusiasts argue that these games have educational value, by teaching logic, or vocabulary, or something. Some are even used for medical therapy. Probably the most important effect of these games, however, is that they have brought a form of the computer into millions of homes and convinced millions of people that it is both pleasant and easy to operate, what computer buffs call "user friendly." Games, says Philip D. Estridge, head of IBM's personal computer operations, "aid in the discovery process."

Apart from games, the two things that the computer does best have wide implications but are quite basic. One is simply computation, manipulating thousands of numbers per second. The other is the ability to store, sort through and rapidly retrieve immense amounts of information. More than half of all employed Americans now earn their living not by producing things but as "knowledge workers," exchanging various kinds of information, and the personal computer stands ready to change how all of them do their jobs.

▸ Frank Herringer, a group vice president of Transamerica Corp., installed an Apple in his suburban home in Lafayette, Calif., and spent a weekend analyzing various proposals for Transamerica's $300 million takeover of the New York insurance brokerage firm of Fred S. James Co. Inc. "It allowed me to get a good feel for the critical numbers," says Herringer. "I could work through alternative options, and there were no leaks."

▸ Terry Howard, 44, used to have a long commute to his job at a San Francisco stock brokerage, where all his work involved computer data and telephoning. With a personal computer, he set up his own firm at home in San Rafael. Instead of rising at 6 a.m. to drive to the city, he runs five miles before settling down to work. Says he: "It didn't make sense to spend two hours of every day burning up gas, when my customers on the telephone don't care whether I'm sitting at home or in a high rise in San Francisco."

▸ John Watkins, safety director at Harriet & Henderson Yarns, in Henderson, N.C., is one of 20 key employees whom the company helped to buy home computers and paid to get trained this year. Watkins is trying to design a program that will record and analyze all mill accidents: who was injured, how, when, why. Says he: "I keep track of all the cases that are referred to a doctor, but for every doctor case, there are 25 times as many first-aid cases that should be recorded." Meantime, he has designed a math program for his son Brent and is shopping for a word-processing program to help his wife Mary Edith write her master's thesis in psychology. Says he: "I don't know what it can't do. It's like asking yourself, 'What's the most exciting thing you've ever done?' Well, I don't know because I haven't done it yet."

▸ Aaron Brown, a former defensive end for the Kansas City Chiefs and now an office-furniture salesman in Minneapolis, was converted to the computer by his son Sean, 15, who was converted at a summer course in computer math. "I thought of computers very much as toys," says Brown, "but Sean started telling me, 'You could use a computer in your work.' I said, 'Yeah, yeah, yeah.' " Three years ago, the family took a vote on whether to go to California for a vacation or to buy an Apple. The Apple won, 3 to 1, and to prove its value, Sean wrote his father a program that computes gross profits and commissions on any sale.

Brown started with "simple things," like filing the names and telephone numbers of potential customers. "Say I was going to a particular area of the city," Brown says. "I would ask the computer to pull up the accounts in a certain zip-code area, or if I wanted all the customers who were in-

PUBLISHING A NEWSLETTER AT HOME: Rohn Engh, who with Wife Jeri puts out *Photo Letter*, a weekly that helps photographers market pictures, uses a TRS-80 in the barn that serves as his office in Star Prairie, Wis., to keep track of 1,400 subscribers

terested in whole office systems, I could pull that up too." The payoff: since he started using the computer, he has doubled his annual sales to more than $1 million.

Brown has spent about $1,500 on software, all bound in vinyl notebooks along a wall of his home in Golden Valley, Minn., but Sean still does a lot of programming on his own. He likes to demonstrate one that he designed to teach French. "*Vive la France!*" it says, and then starts beeping the first notes of *La Marseillaise*. His mother Reatha uses the computer to help her manage a gourmet cookware store, and even Sister Terri, who originally cast the family's lone vote against the computer, uses it to store her high school class notes. Says Brown: "It's become kind of like the bathroom. If someone is using it, you wait your turn."

Reatha Brown has been lobbying for a new carpet, but she is becoming resigned to the prospect that the family will acquire a new hard-disc drive instead. "The videocassette recorder," she sighs, pointing across the room, "that was my other carpet." Replies her husband, setting forth an argument that is likely to be replayed in millions of households in the years just ahead: "We make money with the computer, but all we can do with a new carpet is walk on it. Somebody once said there were five reasons to spend money: on necessities, on investments, on self-improvement, on memories and to impress your friends. The carpet falls in that last category, but the computer falls in all five."

By itself, the personal computer is a machine with formidable capabilities for tabulating, modeling or recording. Those capabilities can be multiplied almost indefinitely by plugging it into a network of other computers. This is generally done by attaching a desktop model to a telephone line (two-way cables and earth satellites are coming increasingly into use). One can then dial an electronic data base, which not only provides all manner of information but also collects and transmits messages: electronic mail.

The 1,450 data bases that now exist in the U.S. range from general information services like the Source, a *Reader's Digest* subsidiary in McLean, Va., which can provide stock prices, airline schedules or movie reviews, to more specialized services like the American Medical Association's AMA/NET, to real esoterica like the Hughes Rotary Rig Report. Fees vary from $300 an hour to less than $10.

Just as the term personal computer can apply to both a home machine and an office machine (and indeed blurs the distinction between the two places) many of the first enthusiastic users of these devices have been people who do much of their work at home: doctors, lawyers, small businessmen, writers, engineers. Such people also have special needs for the networks of specialized data.

Orthopedic Surgeon Jon Love, of Madisonville, Ky., connects the Apple in his home to both the AMA/NET, which

offers, among other things, information on 1,500 different drugs, and Medline, a compendium of all medical articles published in the U.S. "One day I accessed the computer three times in twelve minutes," he says. "I needed information on arthritis and cancer in the leg. It saved me an hour and a half of reading time. I want it to pay me back every time I sit down at it."

Charles Manly III practices law in Grinnell, Iowa (pop. 8,700), a town without a law library, so he pays $425 a month to connect his CPT word processor to Westlaw, a legal data base in St. Paul. Just now he needs precedents in an auto insurance case. He dials the Westlaw telephone number, identifies himself by code, then types: "Courts (Iowa) underinsurance." The computer promptly tells him there is only one such Iowa case, and it is 14 years old. Manly asks for a check on other Midwestern states, and it gives him a long list of precedents in Michigan and Minnesota. "I'm not a chiphead," he says, "but if you don't keep up with the new developments, even in a rural general practice, you're not going to have the competitive edge."

The personal computer and its networks are even changing that oldest of all home businesses, the family farm. Though only about 3% of commercial farmers and ranchers now have computers, that number is expected to rise to nearly 20% within the next five years. One who has grasped the true faith is Bob Johnson, who helps run his family's 2,800-acre pig farm near De Kalb, Ill. Outside, the winter's first snowflakes have dusted the low-slung roofs of the six red-and-white barns and the brown fields specked with corn stubble. Inside the two-room office building, Johnson slips a disc into his computer and types "D" (for dial) and a telephone number. He is immediately connected to the Illinois farm bureau's newly computerized AgriVisor service. It not only gives him weather conditions to the west and the latest hog prices on the Chicago commodities exchange, but also offers advice. Should farmers continue to postpone the sale of their newly harvested corn? "Remember," the computer counsels, "that holding on for a dime or a nickel may not be worth the long-term wait."

Johnson started out playing computer games on an Apple II, but then "those got shoved in the file cabinet." He began computerizing all his farm records, which was not easy. "We could keep track of the hogs we sold in dollars, but we couldn't keep track of them by pounds and numbers at the same time." He started shopping around and finally acquired a $12,000 combination at a shop in Lafayette, Ind.: a microcomputer from California Computer Systems, a video screen from Ampex, a Diablo word printer and an array of agricultural programs.

Johnson's computer now knows the yields on 35 test plots of corn, the breeding records of his 300 sows, how much feed his hogs have eaten (2,787,260 lbs.) and at what cost ($166,047.73). "This way, you can charge your hogs the cost of the feed when you sell them and figure out if you're making any money," says Johnson. "We never had this kind of information before. It would have taken too long to calculate. But we knew we needed it."

Just as the computer is changing the way work is done in home offices, so it is revolutionizing the office. Routine tasks like managing payrolls and checking inventories have long since been turned over to computers, but now the typewriter is giving way to the word processor, and every office thus becomes part of a network. This change has barely begun; about 10% of the typewriters in the 500 largest industrial corporations have so far been replaced. But the economic imperatives are inescapable. All told, office professionals could save about 15% of their time if they used the technology now available, says a study by Booz, Allen & Hamilton, and that technology is constantly improving. In one survey of corporations, 55% said they were planning to acquire the latest equipment. This technology involves not just word processors but computerized electronic message systems that could eventually make paper obsolete, and wall-size, two-way TV teleconference screens that will obviate traveling to meetings.

DAVID BURNETT—CONTACT

CHECKING A MEDICAL PROGRAM: Dr. Don Hall records cardiovascular-fitness test results on a TRS-80 in Portland, Ore.

The standard home computer is sold only to somebody who wants one, but the same machine can seem menacing when it appears in an office. Secretaries are often suspicious of new equipment, particularly if it appears to threaten their jobs, and so are executives. Some senior officials resist using a keyboard on the ground that such work is demeaning. Two executives in a large firm reportedly refuse to read any computer print-out until their secretaries have retyped it into the form of a standard memo. "The biggest problem in introducing computers into an office is management itself," says Ted Stout of National Systems Inc., an office design firm in Atlanta. "They don't understand it, and they are scared to death of it."

But there is an opposite fear that drives anxious executives toward the machines: the worry that younger and more sophisticated rivals will push ahead of them. "All you have to do," says Alexander Horniman, an industrial psychologist at the University of Virginia's Darden School of Business, "is walk down the hall and see people using the computer and imagine they have access to all sorts of information you don't." Argues Harold Todd, executive vice president at First Atlanta Bank: "Managers who do not have the ability to use a terminal within three to five years may become organizationally dysfunctional." That is to say, useless.

If more and more offices do most of their work on computers, and if a personal computer can be put in a living room, why should anyone have to go to work in an office at all? The question can bring a stab of hope to anybody who spends hours every day on the San Diego Freeway or the Long Island Rail Road. Nor is "telecommuting" as unrealistic as it sounds. Futurist Jack Nilles of the University of Southern California has estimated that any home computer would soon pay for itself from savings in commuting expenses and in city office rentals.

Is the great megalopolis, the marketplace of information, about to be doomed by the new technology? Another futurist, Alvin Toffler, suggests at least a trend in that direction. In his 1980 book, *The Third Wave*, he portrays a 21st century world in which the computer revolution has canceled out many of the fundamental changes wrought by the Industrial Revolution: the centralization and standardization of work in the factory, the office, the assembly line. These changes may seem eternal, but they are less than two centuries old. Instead, Toffler imagines a revived version of pre-industrial life in what he has named "the electronic cottage," a utopian abode where all members of the family work, learn and enjoy their leisure

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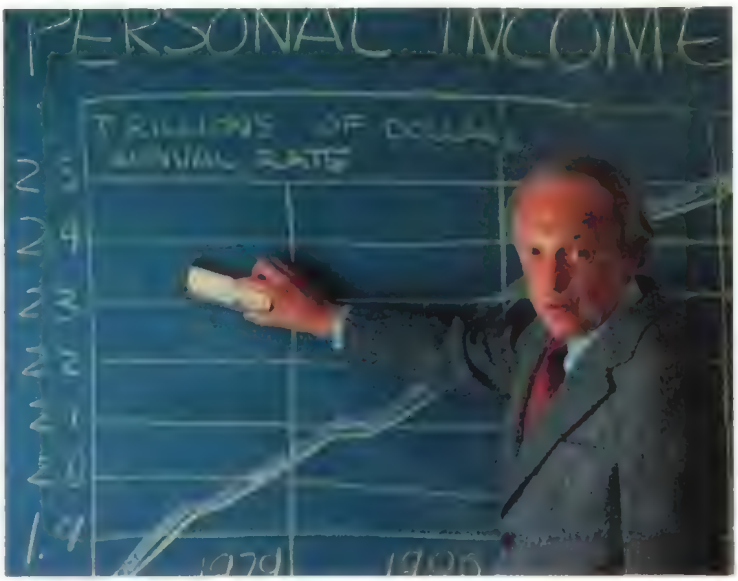

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around the electronic hearth, the computer. Says Vice President Louis H. Mertes of the Continental Illinois Bank and Trust Co. of Chicago, who is such a computer enthusiast that he allows no paper to be seen in his office (though he does admit to keeping a few files in the drawer of an end table): "We're talking when—not if—the electronic cottage will emerge."

Continental Illinois has experimented with such electronic cottages by providing half a dozen workers with word processors so they could stay at home. Control Data tried a similar experiment and ran into a problem: some of its 50 "alternate site workers" felt isolated, deprived of their social life around the water cooler. The company decided to ask them to the office for lunch and meetings every week. "People are like ants, they're communal creatures," says Dean Scheff, chairman and founder of CPT Corp., a word-processing firm near Minneapolis. "They need to interact to get the creative juices flowing. Very few of us are hermits."

TIME's Yankelovich poll underlines the point. Some 73% of the respondents believed that the computer revolution would enable more people to work at home. But only 31% said they would prefer to do so themselves. Most work no longer involves a hayfield, a coal mine or a sweatshop, but a field for social intercourse. Psychologist Abraham Maslow defined work as a hierarchy of functions: it first provides food and shelter, the basics, but then it offers security, friendship, "belongingness." This is not just a matter of trading gossip in the corridors; work itself, particularly in the information industries, requires the stimulation of personal contact in the exchange of ideas: sometimes organized conferences, sometimes simply what is called "the schmooze factor." Says Sociologist Robert Schrank: "The workplace performs the function of community."

But is this a basic psychological reality or simply another rut dug by the Industrial Revolution? Put another way, why do so many people make friends at the office rather than among their neighbors? Prophets of the electronic cottage predict that it will once again enable people to find community where they once did: in their communities. Continental Illinois Bank, for one, has opened a suburban "satellite work station" that gets employees out of the house but not all the way downtown. Ford, Atlantic Richfield and Merrill Lynch have found that teleconferencing can reach far more people for far less money than traditional sales conferences.

Whatever the obstacles, telecommuting seems particularly rich with promise for millions of women who feel tied to the home because of young children. Sarah Sue Hardinger has a son, 3, and a daughter three months old; the computer in her cream-colored stucco house in South Minneapolis is surrounded by children's books, laundry, a jar of Dippity Do. An experienced programmer at Control Data before she decided to have children, she now settles in at the computer right after breakfast, sometimes holding the baby in a sling. She starts by reading her computer mail, then sets to work converting a PLATO grammar program to a disc that will be compatible with Texas Instruments machines. "Mid-morning I have to start paying attention to the three-year-old, because he gets antsy," says Hardinger. "Then at 11:30 comes *Sesame Street* and *Mr. Rogers*, so that's when I usually get a whole lot done." When her husband, a building contractor, comes home and takes over the children, she returns to the computer. "I use part of my house time for work, part of my work time for the house," she says. "The baby has demand feeding; I have demand working."

DAVID BURNETT—CONTACT

KEEPING UP DOWN ON THE FARM: Missouri rancher's wife Melesa Beckett uses her computer to update records on 350 cattle

To the nation's 10 million physically handicapped, telecommuting encourages new hopes of earning a livelihood. A Chicago-area organization called Lift has taught computer programming to 50 people with such devastating afflictions as polio, cerebral palsy and spinal damage. Lift President Charles Schmidt cites a 46-year-old man paralyzed by polio: "He never held a job in his life until he entered our program three years ago, and now he's a programmer for Walgreens."

Just as the vast powers of the personal computer can be vastly multiplied by plugging it into an information network, they can be extended in all directions by attaching the mechanical brain to sensors, mechanical arms and other robotic devices. Robots are already at work in a large variety of dull, dirty or dangerous jobs: painting automobiles on assembly lines and transporting containers of plutonium without being harmed by radiation. Because a computerized robot is so easy to reprogram, some experts foresee drastic changes in the way manufacturing work is done: toward customization, away from assembly-line standards. When the citizen of tomorrow wants a new suit, one futurist scenario suggests, his personal computer will take his measurements and pass them on to a robot that will cut his choice of cloth with a laser beam and provide him with a perfectly tailored garment. In the home too, computer enthusiasts delight in imagining machines performing the domestic chores. A little of that fantasy is already reality. New York City Real Estate Executive David Rose, for example, uses his Apple in business deals, to catalogue his 4,000 books and to write fund-raising letters to his Yale classmates. But he also uses it to wake him in the morning with soft music, turn on the TV, adjust the lights and make the coffee.

In medicine, the computer, which started by keeping records and sending bills, now suggests diagnoses. CADUCEUS knows some 4,000 symptoms of more than 500 diseases; MYCIN specializes in infectious diseases; PUFF measures lung functions. All can be plugged into a master network called SUMEX-AIM, with headquarters at Stanford in the West and Rutgers in the East. This may all sound like another step toward the disappearance of the friendly neighborhood G.P., but while it is possible that a family doctor would recognize 4,000 different symptoms, CADUCEUS is more likely to see patterns in what patients report and can then suggest a diagnosis. The process may sound dehumanized, but in one hospital where the computer specializes in peptic ulcers, a survey of patients showed that they found the machine "more friendly, polite, relaxing and comprehensible" than the average physician.

The microcomputer is achieving dramatic effects on the ailing human body. These devices control the pacemakers implanted in victims of heart disease; they pump carefully measured quantities of insulin into the bodies of diabetics; they test blood samples for hundreds of different allergies; they translate sounds into vibrations that the deaf can "hear"; they stimu-

late deadened muscles with electric impulses that may eventually enable the paralyzed to walk.

In all the technologists' images of the future, however, there are elements of exaggeration and wishful thinking. Though the speed of change is extraordinary, so is the vastness of the landscape to be changed. New technologies have generally taken at least 20 years to establish themselves, which implies that a computer salesman's dream of a micro on every desk will not be fulfilled in the very near future. If ever.

Certainly the personal computer is not without its flaws. As most new buyers soon learn, it is not that easy for a novice to use, particularly when the manuals contain instructions like this specimen from Apple: "This character prevents script from terminating the currently forming output line when it encounters the script command in the input stream."

Another problem is that most personal computers end up costing considerably more than the ads imply. The $100 model does not really do very much, and the $1,000 version usually requires additional payments for the disc drive or the printer or the modem. Since there is very little standardization of parts among the dozens of new competitors, a buyer who has not done considerable homework is apt to find that the parts he needs do not fit the machine he bought.

Software can be a major difficulty *(see box)*. The first computer buyers tended to be people who enjoyed playing with their machines and designing their own programs. But the more widely the computer spreads, the more it will have to be used by people who know no more about its inner workings than they do about the insides of their TV sets—and do not want to. They will depend entirely on the commercial programmers. Good programs are expensive both to make and to buy. Control Data has invested $900 million in its PLATO educational series and has not yet turned a profit, though its hopes run into the billions. A number of firms have marketed plenty of shoddy programs, but they are not cheap either. "Software is the new bandwagon, but only 20% of it is any good," says Diana Hestwood, a Minneapolis-based educational consultant. She inserts a math program and deliberately makes ten mistakes. The machine gives its illiterate verdict: "You taken ten guesses." Says Atari's chief scientist, Alan Kay: "Software is getting to be embarrassing."

Many of the programs now being touted are hardly worth the cost, or hardly worth doing at all. Why should a computer be needed to balance a checkbook or to turn off the living-room lights? Or to recommend a dinner menu, particularly when it can consider (as did a $34 item called the Pizza Program) ice cream as an appetizer? Indeed, there are many people who may quite reasonably decide that they can get along very nicely without a computer. Even the most impressive information networks may provide the customer with nothing but a large telephone bill. "You cannot rely on being able to find what you want," says Atari's Kay. "It's really more useful to go to a library."

It is becoming increasingly evident that a fool assigned to work with a computer can conceal his own foolishness in the guise of high-tech authority. Lives there a single citizen who has not been commanded by a misguided computer to pay an income tax installment or department store bill that he has already paid?

What is true for fools is no less true for criminals, who are now able to commit electronic larceny from the comfort of their living rooms. The probable champion is Stanley Mark Rifkin, a computer analyst in Los Angeles, who tricked the machines at the Security Pacific National Bank into giving him $10 million. While

CATALOGUING A BOOK COLLECTION: David Rose also uses his Apple to awaken him

free on bail for that in 1979 (he was eventually sentenced to eight years), he was arrested for trying to steal $50 million from Union Bank (the charges were eventually dropped). According to Donn Parker, a specialist in computer abuse at SRI International (formerly the Stanford Research Institute), "Nobody seems to know exactly what computer crime is, how much of it there is, and whether it is increasing or decreasing. We do know that computers are changing the nature of business crime significantly."

Even if all the technical and intellectual problems can be solved, there are major social problems inherent in the computer revolution. The most obvious is unemployment, since the basic purpose of commercial computerization is to get more work done by fewer people. One British study predicts that "automation-induced unemployment" in Western Europe could reach 16% in the next decade, but most analyses are more optimistic. The general rule seems to be that new technology eventually creates as many jobs as it destroys, and often more. "People who put in computers usually increase their staffs as well," says CPT's Scheff. "Of course," he adds, "one industry may kill another industry. That's tough on some people."

Theoretically, all unemployed workers can be retrained, but retraining programs are not high on the nation's agenda. Many new jobs, moreover, will require an aptitude in using computers, and the retraining needed to use them will have to be repeated as the technology keeps improving. Says a chilling report by the Congressional Office of Technology Assessments: "Lifelong retraining is expected to become the norm for many people." There is already considerable evidence that the schoolchildren now being educated in the use of computers are generally the children of the white middle class. Young blacks, whose unemployment rate stands today at 50%, will find another barrier in front of them.

Such social problems are not the fault of the computer, of course, but a consequence of the way the American society might use the computer. "Even in the days of the big mainframe computers, they were a machine for the few," says Katharine Davis Fishman, author of *The Computer Establishment*. "It was a tool to help the rich get richer. It still is to a large extent. One of the great values of the personal computer is that smaller concerns, smaller organizations can now have some of the advantages of the bigger organizations."

How society uses its computers depends greatly on what kind of computers are made and sold, and that depends, in turn, on an industry in a state of chaotic growth. Even the name of the product is a matter of debate: "microcomputer" sounds too technical, but "home computer" does not fit an office machine. "Desktop" sounds awkward, and "personal computer" is at best a compromise. Innovators are pushing off in different directions Hewlett Packard is experimenting with machines that respond to vocal commands; Osborne is leading a rush toward portable computers, ideally no larger than a book. And for every innovator, there are at least five imitators selling copies.

There is much talk of a coming shakeout, and California Consultant David E. Gold predicts that perhaps no more than a dozen vendors will survive the next five years. At the moment, Dataquest estimates that Texas Instruments leads the low-price parade with a 35% share of the market in computers selling for less than $1,000. Next come Timex (26%), Commodore (15%) and Atari (13%). In the race among machines priced between $1,000 and $5,000, Apple still commands 26%, followed by IBM (17%) and Tandy/Radio Shack (10%). But IBM, which has dominated the mainframe computer market for decades, is coming on very strong. Apple, fighting back, will unveil its new Lisa model in January, putting great emphasis on user friendliness. The user will be able

TEACHING AN OLDER GENERATION NEW TRICKS: Ann Blais, 13, a computer tutor for two years at the Jordan Middle School in Palo Alto, Calif., explains the mysteries of programming to two adventurous septuagenarians, Virgil and Gretchen Miles

to carry out many functions simply by pointing to a picture of what he wants done rather than typing instructions. IBM is also reported to be planning to introduce new machines in 1983, as are Osborne and others.

Just across the horizon, as usual, lurk the Japanese. During the 1970s, U.S. computer manufacturers complacently felt that they were somehow immune from the Japanese combination of engineering and salesmanship that kept gnawing at U.S. auto, steel and appliance industries. One reason was that the Japanese were developing their large domestic market. When they belatedly entered the U.S. battlefield, they concentrated not on selling whole systems but on particular sectors—with dramatic results. In low-speed printers using what is known as the dot-matrix method, the Japanese had only a 6% share of the market in 1980; in 1982, they provided half the 500,000 such printers sold in the U.S. Says Computerland President Ed Faber: "About 75% of the dot-matrix printers we sell are Japanese, and almost all the monitors. There is no better quality electronics than what we see coming from Japan."

Whatever its variations, there is an inevitability about the computerization of America. Commercial efficiency requires it, Big Government requires it, modern life requires it, and so it is coming to pass. But the essential element in this sense of inevitability is the way in which the young take to computers: not as just another obligation imposed by adult society but as a game, a pleasure, a tool, a system that fits naturally into their lives. Unlike anyone over 40, these children have grown up with TV screens; the computer is a screen that responds to them, hooked to a machine that can be programmed to respond the way they want it to. That is power

There are now more than 100,000 computers in U.S. schools, compared with 52,000 only 18 months ago. This is roughly one for every 400 pupils. The richer and more progressive states do better. Minnesota leads with one computer for every 50 children and a locally produced collection of 700 software programs. To spread this development more evenly and open new doors for business, Apple has offered to donate one computer to every public school in the U.S.—a total of 80,000 computers worth $200 million retail—if Washington will authorize a 25% tax write-off (as is done for donations of scientific equipment to colleges). Congress has so far failed to approve the idea, but California has agreed to a similar proposal.

Many Americans concerned about the erosion of the schools put faith in the computer as a possible savior of their children's education, at school and at home. The Yankelovich poll showed that 57% thought personal computers would enable children to read and to do arithmetic better. Claims William Ridley, Control Data's vice president for education strategy: "If you want to improve youngsters one

grade level in reading, our PLATO program with teacher supervision can do it up to four times faster and for 40% less expense than teachers alone."

No less important than this kind of drill, which some critics compare with the old-fashioned flash cards, is the use of computers to teach children about computers. They like to learn programming, and they are good at it, often better than their teachers, even in the early grades. They treat it as play, a secret skill, unknown among many of their parents. They delight in cracking corporate security and filching financial secrets, inventing new games and playing them on military networks, inserting obscene jokes into other people's programs. In soberer versions that sort of skill will become a necessity in thousands of jobs opening up in the future. Beginning in 1986, Carnegie-Mellon University expects to require all of its students to have their own personal computers. "People are willing to spend a large amount of money to educate their children," says Author Fishman. "So they're all buying computers for Johnny to get a head start (though I have not heard anyone say, 'I am buying a computer for Susie')."

This transformation of the young raises a fundamental and sometimes menacing question: Will the computer change the very nature of human thought? And if so, for better or worse? There has been much time wasted on the debate over whether computers can be made to think, as HAL seemed to be doing in *2001*, when it murdered the astronauts who might challenge its command of the spaceflight. That answer is simple: computers do not think, but they do simulate many of the processes of the human brain: remembering, comparing, analyzing. And as people rely on the computer to do things that they used to do inside their heads, what happens to their heads?

Will the computer's ability to do routine work mean that human thinking will shift to a higher level? Will IQs rise? Will there be more intellectuals? The computer may make a lot of learning as unnecessary as memorizing the multiplication tables. But if a dictionary stored in the computer's memory can easily correct any spelling mistakes, what is the point of learning to spell? And if the mind is freed from intellectual routine, will it race off in pursuit of important ideas or lazily spend its time on more video games?

Too little is known about how the mind works, and less about how the computer might change that process. The neurological researches of Mark Rosenzweig and his colleagues at Berkeley indicate that animals trained to learn and assimilate information develop heavier cerebral cortices, more glial cells and bigger nerve cells. But does the computer really stimulate the brain's activity or, by doing so much of its work, permit it to go slack?

Some educators do believe they see the outlines of change. Seymour Papert, professor of mathematics and education at M.I.T. and author of *Mindstorms: Children, Computers and Powerful Ideas*, invented the computer language named Logo, with which children as young as six can program computers to design mathematical figures. Before they can do that, however, they must learn how to analyze a problem logically, step by step. "Getting a computer to do something," says Papert, "requires the underlying process to be described, on some level, with enough precision to be carried out by the machine." Charles P. Lecht, president of the New York consulting firm Lecht Scientific, argues that "what the lever was to the body, the computer system is to the mind." Says he: "Computers help teach kids to think. Beyond that, they motivate people to think. There is a great difference between intelligence and manipulative capacity. Computers help us to realize that difference."

TRYING NOVEL METHODS: At his home in Grants Pass in southwestern Oregon, Don Hentich practices on his Atari

The argument that computers train minds to be logical makes some experts want to reach for the computer key that says ERASE. "The last thing you want to do is think more logically," says Atari's Kay. "The great thing about computers is that they have no gravity systems. The logical system is one that you make up. Computers are a wonderful way of being bizarre."

Sherry Turkle, a sociologist now finishing a book titled *The Intimate Machine: Social and Cultural Studies of Computers and People*, sees the prospect of change in terms of perceptions and feelings. Says she: "Children define what's special about people by contrasting them with their nearest neighbors, which have always been the animals. People are special because they know how to think. Now children who work with computers see the computer as their nearest neighbor, so they see that people are special because they feel. This may become much more central to the way people think about themselves. We may be moving toward a re-evaluation of what makes us human."

For all such prophecies, M.I.T. Computer Professor Joseph Weizenbaum has answers ranging from disapproval to scorn. He has insisted that "giving children computers to play with . . . cannot touch . . . any real problem," and he has described the new computer generation as "bright young men of disheveled appearance [playing out] megalomaniacal fantasies of omnipotence."

Weizenbaum's basic objection to the computer enthusiasts is that they have no sense of limits. Says he: "The assertion that all human knowledge is encodable in streams of zeros and ones—philosophically, that's very hard to swallow. In effect, the whole world is made to seem computable. This generates a kind of tunnel vision, where the only problems that seem legitimate are problems that can be put on a computer. There is a whole world of real problems, of human problems, which is essentially ignored."

So the revolution has begun, and as usually happens with revolutions, nobody can agree on where it is going or how it will end. Nils Nilsson, director of the Artificial Intelligence Center at SRI International, believes the personal computer, like television, can "greatly increase the forces of both good and evil." Marvin Minsky, another of M.I.T.'s computer experts, believes the key significance of the personal computer is not the establishment of an intellectual ruling class, as some fear, but rather a kind of democratization of the new technology. Says he: "The desktop revolution has brought the tools that only professionals have had into the hands of the public. God knows what will happen now."

Perhaps the revolution will fulfill itself only when people no longer see anything unusual in the brave New World, when they see their computer not as a fearsome challenger to their intelligence but as a useful linkup of some everyday gadgets: the calculator, the TV and the typewriter. Or as Osborne's Adam Osborne puts it: "The future lies in designing and selling computers that people don't realize are computers at all."

—By Otto Friedrich. Reported by Michael Moritz/San Francisco, J. Madeleine Nash/Chicago and Peter Stoler/New York

The Updated Book of Jobs

A testament of prophecy, true belief, go-getting and megabucks

Stop. Before proceeding: a test. A kind of measured mile on the long road to high-tech heaven.

There are only a couple of questions. Either: a) "What will a computer do for me?"; b) "Do I really need a personal computer?"; or c)—the beginner's question—"What *are* these things anyway?"

A bonus: there are no penalties for wrong answers. The weight of the argument and the heat of the debate are what count now. And of all the people who have floated these questions into the cultural ozone—scientists and sociologists, computer freaks and microchip madmen, quick-buck artists and free-falling futurists—none has kept them aloft for so long, or turned them to such profitable purpose, as Steven Paul Jobs.

He is 27 years old. He lives in Los Gatos, Calif., and works 20 minutes away in Cupertino, a town of 34,000 that his company has so transformed that some San Franciscans, about 35 miles to the north, have taken to calling it Computertino. There is no doubt in any case that this is a company town, although the company, Apple, did not exist seven years ago. Now, Apple just closed its best year in business, racking up sales of $583 million. The company stock has a market value of $1.7 billion. Jobs, as founder of Apple, chairman of the board, media figurehead and all-purpose dynamo, owns about 7 million shares of that stock. His personal worth is on the balmy side of $210 million. But past the money, and the hype, and the fairy-tale success, Jobs has been the prime advanceman for the computer revolution. With his smooth sales pitch and a blind faith that would have been the envy of the early Christian martyrs, it is Steven Jobs, more than anyone, who kicked open the door and let the personal computer move in.

Jobs (rhymes with lobs) did not make the revolution alone. He did not even make the machine that made the revolution, the Apple II, the personal computer that along with its other skills seemed to mint money. Stephen Wozniak, 32, Jobs' friend and former colleague who looks like a Steiff Teddy bear on a maintenance dose of marshmallows, created the Apple II. He worked from some pre-existing technology, scaling it down radically and making it affordable to consumers as well as corporations. "Steve didn't do one circuit, design or piece of code," says Wozniak, who was widely regarded as the true technological wizard in Jobs' corporate Oz. "He's not really been into computers, and to this day he has never gone through a computer manual. But it never crossed my mind to sell computers. It was Steve who said, 'Let's hold them up in the air and sell a few.' "

Steven Jobs, the man at the core of Apple, checks out the long view from the top

From a mail drop and an answering service, $1.7 billion in market value.

"He can con you into believing his dream," says Bill Atkinson, who by some estimates is the most gifted programmer at Apple. A company consultant, Guy Tribble, says that Jobs sets up what he calls "a reality-distortion field. He has the ability to make people around him believe in his perception of reality through a combination of very fast comeback, catch phrases and the occasional very original insight, which he throws in to keep you off balance." By whatever name—the dream, the pitch, the rap, the reality-distortion field—Jobs' unwavering ambition and ferocious will have caused a number of people to become rich. Says Jobs, employing perhaps extravagant arithmetic: "We've made about 300 people at Apple millionaires."

Vastly more important, Jobs has been instrumental in selling hundreds of thousands, possibly millions, of Americans on the new technology. He insisted that the Apple II be what the jargon calls "user friendly." He wanted it light and trim, well designed in muted colors, and today pushes his engineers hard to make machines that will not frighten away a skittish and skeptical clientele. The Jobs sales skills will be hard pressed in the months to come. In mid-January, Apple will intro-

Photographs for TIME by Diana Walker

Jobs, in the catbird seat, leads a lunchtime huddle of his Mackintosh design team

duce Lisa, a new model that the company has been working on full-time for four years and that is expected to sell for $10,000. Later in the year, it will officially announce Mackintosh, a more affordable version of Lisa, priced around $2,000. Some of a staff of 70—one of whom is still a teen-ager—are putting in seven-day, 90-hour weeks on Mackintosh, working under Jobs. As a boss, Jobs is admired for courting long chances, but, adds a friend, "something is happening to Steve that's sad and not pretty, something related to money and power and loneliness. He's less sensitive to people's feelings. He runs over them, snowballs them." Adds Jeff Raskin, a former Apple publications manager: "He would have made an excellent King of France."

This once and future king had decidedly modest beginnings. His parents, Paul and Clara Jobs, adopted Steven in February 1955 and later moved from Mountain View, on the peninsula south of San Francisco, to Los Altos after their son complained of rough times at the junior high school. "He came home one day from the seventh grade," Paul Jobs remembers, "and said if he had to go back to school there again he just wouldn't go. So we decided we'd better move."

Jobs made his way through Homestead High, recalls Electronics Teacher John McCollum, "as something of a loner. He always had a different way of looking at things." Solitude may, however, have bred ambition. McCollum was stunned to learn that the young loner, needing parts for class projects, picked up the phone and called Burroughs collect in Detroit and Bill Hewlett, co-founder of Hewlett-Packard, over in Palo Alto.

Hewlett wound up supplying Jobs with parts for a frequency counter, a device that measures the speed of electronic impulses. This introduced Jobs to the concept of timing, critical for understanding a computer, and furnished him with a cornerstone that, according to Wozniak, he never bothered to build on. Says Wozniak: "I doubt Steve was careful down to the last detail, which is really the key to high-level engineering." Shape, not subtlety, was more in Jobs' line, foreshadowing what one Apple manager calls the "technical ignorance he's not willing to admit." It was the practical applications of technology that excited Jobs, whether it was getting together with Wozniak to use "blue boxes" to make free long-distance calls or helping to design for the graduating class of '71 a mechanical sign that showed a huge hand making a time-honored gesture of rudeness.

Despite such spirited eruptions, Jobs was still uncertain, displaced, curious. He graduated, dropped acid for the first time ("All of a sudden the wheatfield was playing Bach") and lived with his first serious girlfriend in a small wooden house along the Santa Cruz Mountains. As the summer ended, he headed for Reed College in Oregon. His father recalls what must have been a familiar litany: "He said if he didn't go there he didn't want to go anywhere." Jobs lasted only a semester but hung around the campus wandering the labyrinths of postadolescent mysticism and post-Woodstock culture. He tried pre-philosophy, meditation, the *I Ching*, LSD and the excellent vegetarian curries at the Hare Krishna house in Portland. He swore off meat about this time and took up vegetarianism "in my typically nutso way." One temporary result, say friends, was skin tinted by an excess of carotene to the color of an early sunset.

Cutting loose from Reed in 1974, Jobs journeyed back toward home and, answering a help-wanted ad in a local newspaper, landed a job at a video-game outfit called Atari, then in its second year of business. Jobs became the 40th employee of the small and idiosyncratic company founded by Nolan Bushnell and fueled by the success of Pong, the first of a long line of video recreations that turned simple games into eye-glazing national obsessions. Atari was a pretty loose place—staff brainstorming sessions were fueled with generous quantities of grass—but even there Jobs did not quite fit in. "His mind kept going a mile a minute," says Al Alcorn, Atari's chief engineer at the time. "The engineers in the lab didn't like him. They thought he was arrogant and brash. Finally, we made an agreement that he come to work late at night."

His Atari salary helped stake Jobs to a trip to India, where he met up with a Reed buddy, Dan Kottke. "It was kind of an ascetic pilgrimage," says Kottke, "except we didn't know where we were going." Seeking spiritual solace and enlightenment with a shaved head and a backpack did not distract Jobs from stubbornly haggling over prices in the marketplace and dressing down a Hindu woman for apparently watering their milk. An erratic Siddhartha at best, Jobs came home in the fall of 1974 with more questions than answers. He tried primal therapy, went in search of his real parents and on a friend's farm bumped his head on one of the last vestiges of '60s idealism: communal living. "Once I spent a night sleeping under a table in the kitchen," Jobs says. "In the middle of the night everybody came in and ripped off each other's food."

Jobs turned from life science to applied technology. Wozniak and some other friends gravitated toward an outfit called the Homebrew Computer Club in 1975, and Jobs would occasionally drop by. Wozniak was the computer zealot, the kind of guy who can see a sonnet in a circuit. What Jobs saw was profit. At convocations of the Homebrew, Jobs showed scant interest in the fine points of design, but he was enthusiastic about selling the machines Wozniak was making.

"I was nowhere near as good an engineer as Woz," Jobs freely admits. "He was always the better designer." No one in the neighborhood, however, could match Jobs' entrepreneurial flair and his instincts for the big score. It was Jobs who

The new Lisa struts its stuff for the boss

badgered local electronics suppliers for credit; Jobs who arranged for payment ("They'd say, 'Well, how's 30 days net?' We said, 'Sign us up.' We didn't know what 30 days net was"); Jobs who attracted a first-class industrial p.r. firm and a team of experienced managers; Jobs who organized the early manufacturing; Jobs who finally persuaded Wozniak to leave Hewlett-Packard; and Jobs who gave the fledgling company a name ("One day I just told everyone that unless they came up with a better name by 5 p.m., we would go with Apple"). In 1977, when the Apple II was introduced, the company receipts were kept in a desk drawer. By 1980, when Apple went public, it had sales of $139 million.

Jobs, hyper and overwrought from the flush of such success, would occasionally burst into tears at meetings and would have to be cooled out with a slow walk around the parking lot. His personal life was also precarious. He again met the woman with whom he had spent the summer in the mountains, and she became pregnant before they finally broke up anew. The baby, a girl, was born in the summer of 1978, with Jobs denying his fatherhood and refusing to pay child support. A voluntary blood test performed the following year said "the probability of paternity for Jobs, Steven . . . is 94.1%." Jobs insists that "28% of the male population of the United States could be the father." Nonetheless, the court ordered Jobs to begin paying $385 a month for child support. It may be noted that the baby girl and the machine on which Apple has placed so much hope for the future share the same name: Lisa

There is a further rough parallel between the stormy personal waters Jobs was navigating at the time and some acute growing pains Apple was suffering almost simultaneously. The company's newest addition to the line, the Apple III, went on the market in November 1980 and turned out to be, at first, a thundering dud, what Jobs now characterizes as "an evolutionary product." Apple recalled and repaired the machines, and manufactured better new ones. "A learning experience" is what Jobs terms that parlous period now. Lisa—"a revolutionary product"—will determine just how well Apple has learned its lessons and how tough it can be against a behemoth like IBM. Some outside the company who have used the new machine have been, at their most temperate, wildly enthusiastic.

Spreading the gospel to Stanford students

Enjoying unaccustomed ease at home: "He would have made an excellent King of France"

If Jobs is deft at dealing with his peers and elders in commerce, a comforting combination of overnight plutocrat and shill for a new gold rush, he is positively hypnotic when he takes the computer gospel to the young. Jobs is youthful enough to fit right in and both bright enough and rich enough to get respect. Certainly, he does not live like a superstar. His pleasant home in Los Gatos is nothing that would interest *Architectural Digest:* freshly laundered shirts lie on the floor of an unfurnished second bedroom, a love letter is magneted to the kitchen fridge, the master bedroom holds a dresser, a few framed photos (Einstein, Jobs with his buddy Governor Jerry Brown, a guru), a mattress, an Apple II. He has forsaken vegetarianism ("Interacting with people has got to be seriously balanced against living a little healthier") and dresses with what might be called tailored informality. He is a work junkie, not a sybarite, and tends to see the simple, sensual pleasures in strictly practical terms. "The amount of time you spend shopping and preparing and eating food is enormous," he maintains. "The amount of energy your body spends digesting the food in many cases exceeds the energy we get from the food."

Life at Apple has been tough for some to swallow. Following the initial problems with the Apple III, the company president fired some 40 employees and was in turn dumped by Jobs and current Apple president A.C. ("Mike") Markkula. Steve Wozniak drifted into conspicuous retirement and last year staged a rock concert in the Southern California desert. Some oldtime employees have not shared in the corporate bounty. Says one: "I wasn't obnoxious enough to make myself a millionaire." Jobs drives the staff hard, expecting long hours, high productivity and indefinite patience with his scattershot ideas. "He should be running Walt Disney," says a onetime Apple manager. "That way, every day when he's got some new idea, he can contribute to something different."

Taking care of business means, for Jobs, not just lighting fires under the staff and gladhanding the media. It also involves—crucially—keeping the lines open to the young. His planned donation of 10,000 Apples to California schools gets him good will, a generous tax break and an even stronger foothold in what Hollywood likes to call "the youth market." He makes periodic campus appearances, where he is as likely as not to sit, shoes off, in the lotus position atop a dormitory coffee table and engagingly field questions. Nothing too specific, mind. The students will not press for details on "Supersite," a hazy combination of Disneyland and industrial park that Jobs has been formulating. They may not even know that Jobs, an independent, has at times mulled over some vague political plans, perhaps following in the unorthodox footsteps of Jerry Brown

If machines can be called user friendly, then students might be called computer chummy. They represent key potential customers, as do their kid brothers and sisters. They may use computers now; the majority of them will probably be doing so in five years, at school or at work. So the students sit, rapt, while Jobs spins out his visions. Just a few years ago, they might have been considered shock troops of the computer revolution getting a gung-ho speech from their guerrilla leader. Not today. Now they are the occupying forces listening to a victory address by the field marshal.

He still sounds like one of them. He still looks like one of them. And he has brought them quite an Apple to bite. Perfect. —***By Jay Cocks. Reported by Michael Moritz/Cupertino***

Other Maestros of the Micro

Salesmen and seers, they are in the vanguard of the revolution

It took more than one man or one company, of course, to turn the personal computer into the engine that is powering a new communications revolution. Apple's Steve Jobs is the most famous maestro of the micro, but other personalities played key roles in bringing about the Year of the Machine:

John Opel: Shaking Up the Giant

If any three letters can be considered synonymous with computers, they are IBM. Still the world's dominant computer firm (and eighth largest industrial company in the U.S., with earnings of more than $3 billion in 1982), International Business Machines produces some 65% of the country's mainframe business computers and an estimated 62% of those sold worldwide. But in one area IBM had long been conspicuously absent. Except for a brief, abortive fling in the mid-1970s at selling a small desktop machine called the model 5100 (cost: up to nearly $20,000), the corporation left the personal computer field to upstart firms like Apple and Tandy.

Now, under its aggressive new chief, John R. Opel, 57, IBM has launched itself in a new direction by marketing a small, low-cost personal computer. The creamy white PC (for personal computer), introduced in August 1981, has set a standard of excellence for the industry.

Even Opel finds it all a little amazing. Says he: "Who would have believed ten years ago that we'd have computers in the home?" With his professorial manner and horn-rimmed glasses—he is known as the Brain among colleagues—the mastermind of IBM's policy shift hardly seems the sort to upset an Apple cart. The son of a hardware-store owner of German descent, Opel joined IBM in his home town, Jefferson City, Mo., in 1949 after studying at nearby Westminster College and getting an M.B.A. from the University of Chicago. For ten years he ranged from the Ozarks to the Iowa border, selling IBM products so successfully that he was called to corporate headquarters in Armonk, N.Y., to become assistant to Tom Watson Jr., IBM's president and son of its founder. Opel has been on the rise ever since, becoming president in 1974 and chief executive officer in 1981.

In an effort to get IBM out of a slump that had hit it in the late 1970s, Opel soon started shaking things up. The company began opening retail stores, not only to sell such staples as electric typewriters, but also to position it for a move into the fast-expanding personal computer field. In 1980 top management secretly gave the go-ahead to an engineering team, cloistered at a plant in Boca Raton, Fla., to begin designing a small computer (the project was code-named Acorn). Twelve months later, the PC was rolling off the production line. Breaking with tradition, IBM had used many non-IBM components: the TV monitor came from Taiwan, the printer from Japan and the microprocessor from Intel Corp., a major chipmaker in which IBM last week acquired a 12% interest for $250 million. The investment was one of the largest IBM has ever made in an outside corporation. Software for the PC was provided by outside suppliers as well. To IBM's embarrassment, early users discovered that the PC misplaced decimal points in certain computations, a flaw quickly corrected. But Opel felt no need to be defensive. Said he: "We added real value to that machine, and we will add more as we go along. The performance characteristics are quite unique." With PCs now selling at a brisker rate than ever, the marketplace apparently agreed that IBM had built the Cadillac of the 1982 class.

PAUL NOSKA

Opel: to his colleagues, the Brain

Adam Osborne: Plugging a Hole

As a gossipy and acid-tongued columnist in the trade press, Adam Osborne, 43, regularly charged the microcomputer industry with failing to innovate or serve consumer needs. Finally, in 1981 Osborne decided to produce his own personal computer. A year later the Osborne 1 appeared. Weighing only 24 lbs., it was packaged in a plastic case, could be tucked under an airline seat and carried a price tag of $1,795, including a valuable library of software. The erstwhile heckler had produced the first truly portable business computer.

Scoffers said that the box-shaped beast resembled a World War II field radio. But it had all the features of a higher-priced computer: a detachable keyboard, a screen (albeit only 5 in. diagonal), 64K of memory and two built-in disc drives to run and store programs. It also filled a need. Says Osborne: "I saw a truck-sized hole in the industry, and I plugged it." Even Jobs, often a target of Osborne's stings, professed admiration for his entrepreneurial talent.

Osborne was born in Bangkok to British parents; his father, a somewhat eccentric professor, spent much of his time trying to convert Christians to Hinduism. Osborne earned a doctorate in chemical engineering and worked for Shell Oil Co. before quitting to become a computer consultant and industry gadfly. His self-published book, *An Introduction to Microcomputers*, sold so well (300,000 copies) that he set up his own trade publishing company, which McGraw-Hill later bought.

Osborne needed only four months to build a prototype. He limited his designer to cheap, easily obtainable parts. It takes just 40 screws and 68 minutes to assemble an Osborne 1. Says a company executive: "We've out-Japanesed the Japanese." In fact, the Osborne is so successful that it is spawning imitators, some perhaps better than the original. Ever the optimist, Osborne is preparing to counter with a new portable. Asked about one possible rival from a new Texas firm, he replies, "We'll kill that machine dead, dead, dead."

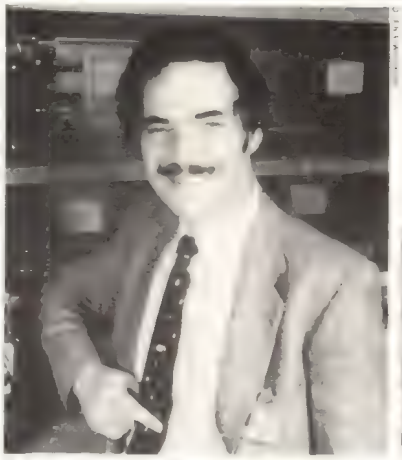
Daniel Bricklin: Software = Hard Cash

The idea dawned on Daniel Bricklin in 1978, while he was looking blear-eyed at blackboards filled with columns of numbers during classes at the Harvard Business School. The professor would be engaged in one of those "what-if," or spread sheet, exercises in corporate financial planning for which the B School is famed. Every time a figure in one of the columns was changed, those in several other columns had to be recalculated as well. "Just one mistake on my calculator," recalls Bricklin, 31, "and I would end up moaning, 'My God, I got the whole series of numbers wrong!' "

That winter Bricklin, an M.I.T. graduate and confessed computer "nerd" since his teens in Philadelphia, and an M.I.T. buddy, Bob Frankston, 33, worked day and night to develop a program for doing such number crunching on a small computer. The result was an electronic spread sheet: VisiCalc (visible calculator). Initially, VisiCalc got a lukewarm reception from computer stores. But when another B School grad, Daniel Fylstra, 31, who had just started up his own company, Personal Software Inc., stepped up the marketing, VisiCalc took off. Word began to get out about its enormous powers. With only a few presses of a computer's keys, VisiCalc could show what effects a change, say, an increase in salary for certain employees, might have on a company's costs, dividends and profits.

Some 400,000 copies of VisiCalc have been sold (retail price: $200 and up, depending on the version), making it the hottest piece of software, other than

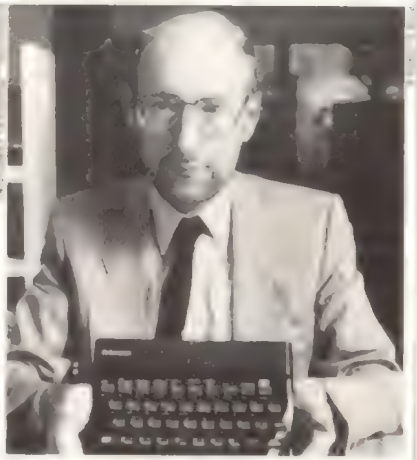
games, ever produced for the personal computer. It is also probably the most widely pirated and imitated (the rip-offs are nicknamed "VisiClones" and "Calc-Alikes"). Sighs Bricklin: "I suppose if imitation is flattery, we've been flattered quite a bit." Headquartered in a refurbished chocolate factory in the Boston suburb of Wellesley, Mass., Bricklin's firm, Software Arts, now has more than 80 employees, as many computer terminals as phones, and excellent prospects (1982's revenues of $7 million were almost double the previous year's). Bricklin and his partner, Frankston, are planning a host of new computer software, including a math program called TK!Solver (after the proofreader's abbreviation for "to come"). They hope it will do for business and scientific models what VisiCalc does for spread sheets



Osborne: knocking the enemy dead

Bricklin: power from pressing a key

Tramiel: mighty mite



Sinclair: opening doors for thousands

Jack Tramiel: Survivor's VICtory

There is no feistier figure in the personal computer business than Jack Tramiel, 54, president of Commodore International, whose PET (Personal Electronic Transactor) computer is the largest seller in Europe and one of the big four in the U.S. along with Apple, Radio Shack and IBM. Unwilling to be trammeled by cheaper imports, he called together investors a few years ago and said, "Gentlemen, we must build and sell a color computer for under $300." When the investors balked, Tramiel pounded the table and said that if they did not produce such a machine, the Japanese would. The result of that Tramiel browbeating is Commodore's VIC 20 (list price: $299, but available for as little as $170), one of the most widely sold computers ever built

The dynamo behind the little machine is something of a mighty mite himself. Short (5 ft. 4 in.) and stocky, the Polish-born Tramiel is hot-tempered, keeps his executive echelons in turmoil, avoids photographers (colleagues have dubbed him "the Howard Hughes of computerdom") and calls himself a "graduate survivor." During World War II he was sent by the Nazis to Auschwitz. After Soviet troops liberated the death camp, he worked for the U.S. Army repairing typewriters. Then he went into business on his own, eventually getting into the manufacture of pocket calculators.

Tramiel believes in depending on as few outside suppliers as possible. Commodore makes its own chips to avoid being caught in a supply or pricing crunch. A ferocious competitor, Tramiel once splashed full-page ads in major newspapers across the U.S. that proclaimed, COMMODORE ATE THE APPLE. For several years, to capture the important education market, he offered schools two PETs for the price of one.

In September the Norristown, Penn., firm brought out its latest small computer, the Commodore 64. It lists at $595, less than half the price of the Apple II Plus, but comes with a third more memory. Tramiel believes he has still more aces up his sleeve. At January's big consumer electronics show in Las Vegas, Commodore plans to show off a new voice-synthesis device that will enable users of its computers to create speech.

Clive Sinclair: Small Is Beautiful

Ever since he was a youngster in England, Clive Sinclair, 42, has had big thoughts about little things. At twelve, he built small mechanical calculators. At 22, after a brief stint as a science writer and editor specializing in home electronics, Sinclair and his wife Anne set up a mail-order house selling transistors and later kits for miniradios no bigger than matchboxes. In the 1970s he made one of the earliest pocket calculators with advanced mathematical functions, designed a pioneering, inexpensive digital wristwatch, and introduced a tiny TV with a 2-in. screen. Ahead of their time, none survived very long.

But the balding, bearded and largely self-taught Sinclair (he passed up the university) kept thinking small. In 1980 he introduced the world's littlest and cheapest personal computer, the Sinclair ZX80. Last September a more sophisticated version of the ZX80 made its debut in the U.S. as the Timex Sinclair 1000 (list price: $99). Since then, the 12-oz. units have been in a race with Commodore for top spot in worldwide computer sales.

Although it has only a minuscule memory (2K) and nothing more than pressure points for keys, Sinclair's minimicro has opened the doors to computing for thousands of novices. It is powerful enough to handle family budgets, do math homework and play simple games. Available at discount for as little as $77.95, it has even won plaudits from the makers of higher-priced rivals. Reasons an Apple spokesman: "After people operate it for a while and find computers aren't threatening, they'll move up."

Determined as ever to make it in the small world, Sinclair plans to bring out another tiny TV, this one only slightly bigger than a pack of cards. Its ingenious flattened tube will later be built into his computer, thereby eliminating the need to hook it up to an external monitor. Sinclair, who relishes racing around in his two Porsches, is also trying to develop an electric car for slow (30 m.p.h.) urban driving—mini-size, of course. Nowadays he spends far fewer hours in his company's labs in Cambridge than he once did. Says Sinclair: "Much of my work consists of thinking, and that can be done anywhere, including bed." —*By Frederic Golden*

Big Dimwits and Little Geniuses

Yesterday's klutzy machines have become today's micromarvels

The first electronic digital computer in the U.S., unveiled at the University of Pennsylvania in 1946, was a collection of 18,000 vacuum tubes, 70,000 resistors, 10,000 capacitors and 6,000 switches, and occupied the space of a two-car garage. Yet ENIAC (for Electronic Numerical Integrator and Calculator) was, in retrospect, a dimwit. When it worked, it did so only for short bursts because its tubes kept burning out. Built to calculate artillery firing tables, the half-million dollar ENIAC could perform 5,000 additions or subtractions per second. Today almost any home computer, costing only a few hundred dollars, can outperform poor old ENIAC as a "number cruncher."

Computer designers have obviously come a long way. But behind their spectacular achievements is a colorful history, one involving so many characters, so many innovations and such wrenching efforts that no single person or even country can claim authorship of the computer.

In a sense, humans have been computing—manipulating and comparing numbers or anything that they may represent—since they first learned how to count, probably with pebbles (the word calculus stems from the Latin for stone). At least 2,500 years ago, the Chinese, among others, discovered that they could handle numbers more easily by sliding little beads on strings. Their invention, the abacus, is still in use.

In 1642, perhaps pained by the long hours his tax-collector father spent doing sums, a 19-year-old French prodigy named Blaise Pascal made an automatic device that could add or subtract with the turning of little wheels. But the clerks who spent their lives doing calculations in those days viewed Pascal's gadget as a job threat, and it never caught on. A short time later, the German mathematician Gottfried Wilhelm Leibniz added the power of multiplication and division. Said he: "It is unworthy of excellent men to lose hours like slaves in the labor of calculations . . ."

But such mechanical contrivances were no more than calculators. They could only do arithmetic, and very clumsily at that. The first man to conceptualize a true computer, one that would be able to do math and much more, was an irascible 19th century English mathematician named Charles Babbage. Incensed by the inaccuracies he found in the mathematical tables of his time, the ingenious Babbage (father of the speedometer, the cowcatcher for locomotives and the first reliable life-expectancy tables) turned his fertile brain to creating an automaton that could rapidly and accurately calculate long lists of functions like logarithms. The result was an intricate system of gears and cogs called the Difference Engine.

Babbage managed to build only a simple model because the craftsmen of the day were unable to machine the precise parts required by the contraption. But the temperamental genius soon had a bolder concept. He called it the Analytical Engine. Even more complex than its predecessor, it had all the essentials of a modern computer: a logic center, or what Babbage called the "mill," which manipulated data according to certain rules; a memory, or "store," for holding information; a control unit for carrying out instructions; and the means for getting data into and out of the machine. Most important of all, its operating procedures could be changed at will: the Analytical Engine was programmable.

Soul of a new machine: a 16-bit logic chip

Ending the slavery of calculations.

Babbage worked obsessively on his machine for nearly 40 years. Presumably he was the world's first computer "nerd." Until his death in 1871, he ground out more and more sketches. The Analytical Engine became hopelessly complicated. It required thousands of individual wheels, levers and belts, all working together in exquisite precision. Few people understood what he was doing, with the notable exception of Lord Byron's beautiful and mathematically gifted daughter, Ada, the Countess of Lovelace, who became Babbage's confidante and public advocate. When the government cut off funds for the Analytical Engine, she and Babbage tried devising a betting system for recouping the money at the track. They lost thousands of pounds.

The Analytical Engine was never built. It would have been as big as a football field and probably needed half a dozen steam locomotives to power it. But one of its key ideas was soon adapted. To feed his machine its instructions, Babbage planned to rely on punched cards, like those used to control color and designs in the looms developed by the French weaver Joseph Marie Jacquard. Ada poetically described the scheme this way: "The Analytical Engine weaves algebraical patterns just as the Jacquard loom weaves flowers and leaves."

In the U.S., a young engineer named Herman Hollerith persuaded the Census Bureau to try the punched-card idea during the forthcoming 1890 census. Such personal information as age, sex, marital status and race was encoded on cards, which were read by electric sensors, and tabulated. Hollerith's equipment worked so well that the Census Bureau's clerks occasionally shut it off to protect their sinecures. Soon punched cards were widely used in office machinery, including that made by a small New York firm that absorbed Hollerith's company and became International Business Machines.

Babbage's dream of a true computer—one that could solve any number of problems—was not realized until the 1930s. In Hitler's Germany, an obscure young engineer named Konrad Zuse, using the German equivalent of an Erector set for parts and his parents' living room as his workshop, built a simple computer that could perform a variety of tasks; its descendants calculated wing designs for the German aircraft industry during World War II. At Bell Telephone Laboratories in the U.S., the research arm of AT&T, a mathematician named George Stibitz built a similar device in 1939 and even showed how it could do calculations over telephone wires. This was the first display of remote data processing. During the war a British group, putting into practice some of the ideas of their brilliant countryman Alan Turing, built a computer called Colossus 1 that helped break German military codes. The British, German and U.S. machines all shared a common characteristic: they were the first computers to use the binary system of numbers, the standard internal language of today's digital computers.

In this they departed from Babbage's "engine." The engine was designed to count by the tens, or the decimal system. Employing ten digits (0 to 9), the decimal system probably dates from the time when humans realized they had ten fingers and ten toes. (Digit comes from the Latin for finger or toe.) But there are other ways of counting as well, by twelves, say, as in the hours of the day or months of the year (the duodecimal system). In the binary system, only two digits are used, 0 and 1. To create a 2, you simply move a column to the left, just as you do to create a 10 in the decimal system. Thus if zero is represented by 0 and one by 1, then two is 10, three 11, four 100, five 101, six 110, seven 111, eight 1000, and so forth.

The binary system is enormously cumbersome. Although any number can be represented, it requires exasperatingly

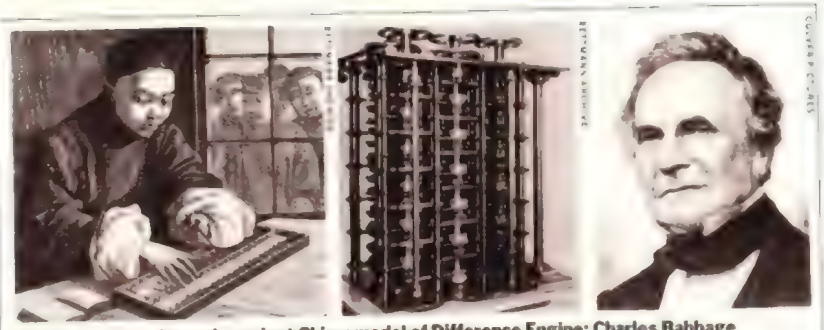
long strings of 0s and 1s. But putting such a system to work is a snap for digital computers. At their most fundamental level, the computers are little more than a complex maze of on-off switches that reduce all information within the machine to one of two states: yes (1) or no (0), represented either by the presence of an electrical charge at a particular site or the absence of one. Accordingly, if in a row of three switches, two of them are in an on position (11) and the other off (0), they would represent the number six (110).

In the world of digital computers, each of these pieces of information is called a bit (for *binary digit*). In most personal computers, bits are shuttled about within the machine eight at a time, although some faster 16-bit machines are already on the small-computer market and even speedier 32-bit machines are in the offing. Clusters of eight bits, forming the equivalent of a single letter in ordinary language, are called bytes. A typical personal computer offers users anywhere from about 16,000 bytes of memory (16K) to 64,000 (64K). But that figure is climbing fast. A few years ago, the standard memory chip, a quarter-inch square of silicon, was 16K. Today it is rapidly becoming 64K, and the industry is already talking of mass-producing 256K chips.

The novel idea of using strings of 1s and 0s to solve complex problems traces back to another gifted Englishman, George Boole. A contemporary of Babbage's, he developed a system of mathematical logic that allows problems to be solved by reducing them to a series of questions requiring only an answer of true or false. Just three logical functions, called AND, OR and NOT, are needed to process Boole's "trues" and "falses," or 1s and 0s. In computers these operations are performed by simple combinations of on-off switches, called logic gates. They pass on information, that is pulses of electricity, only according to the Boolean rules built within them. Even a small home computer has thousands of such gates, each opening and closing more than a million times a second, sending bits and bytes of information coursing through the circuitry at nearly light's velocity (electricity travels about a foot in a billionth of a second).

The earliest digital computers were much more plodding. They relied on electromechanical on-off switches called relays, which physically opened and closed like the old Morse code keys. Physicist-Author Jeremy Bernstein recalls that Mark I, IBM's first large computer, assembled at Harvard during World War II, sounded "like a roomful of ladies knitting." It could multiply two 23-digit numbers in about five seconds. Even some hand-held calculators can now do the same job in a fraction of the time.

ENIAC vastly increased computer speed by using vacuum tubes rather than electromechanical relays as its switches, but it still had a major shortcoming. To perform different operations, it had to be manually rewired, like an old wire-and-plug telephone switchboard, a task that could take several days. The Hungarian-born mathematical genius, John von Neumann, saw a solution. He suggested putting the machine's operating instructions, or program, within the same memory as the data to be processed and writing it in the same binary language. The computer could thus be programmed through the same input devices used to feed in data, such as a keyboard or a reel of tape. The first commercial computer to have such capability was Sperry-Rand's UNIVAC 1, which appeared in 1951 and, much to IBM's chagrin at being beaten, was promptly delivered to the Census Bureau.



Merchant using abacus in ancient China; model of Difference Engine; Charles Babbage

ENIAC, the first electronic digital computer in the U.S., as it looked in 1946

Even as they were being hailed as superbrains, they were becoming obsolete.

Yet even while journalists were hailing the new "electronic superbrains," the machines were already becoming obsolete. In 1947 three scientists at Bell Labs invented a tiny, deceptively simple device called the transistor (short for transfer resistance). It was nothing more than a sandwich of semiconducting materials, mostly crystals of germanium; silicon became popular later. The crystals were arranged so that a tiny current entering one part of the sandwich could control a larger current in another. Hence, they could be used as switches, controlling the ebb and flow of electrons. Even the earliest transistors were much smaller than vacuum tubes, worked faster and had fewer failures. They gave off so little heat that they could be packed closely together. Above all, they were quite cheap to make.

Within a few years, the wizards at Bell Labs built the first fully transistorized (or solid-state) computer, a machine called Leprechaun. But by then Ma Bell, eager to avoid the wrath of the Justice Department's trustbusters, had sold licenses for only $25,000 to anyone who wanted to make transistors, and the scramble was on to profit from them. William Shockley, one of the transistor's three inventors, returned to his California home town, Palo Alto, to form his own company in the heart of what would become known as Silicon Valley. In Dallas, a young, aggressive maker of exploration gear for the oil industry, Texas Instruments, had already hired away another Bell Labs star, Gordon Teal, and was churning out the little gadgets. So were old-line tube makers such as General Electric, RCA, Sylvania and Raytheon. Much of their production went to the Pentagon, which found transistors ideal for a special computing task: the guidance of missiles.

The first computers, even those built with transistors, were put together

like early radios, with tangles of wires connecting each component. But soon electronics manufacturers realized that the wiring could be "printed" directly on a board, eliminating much of the hand-wiring. Then came another quantum leap into the miniworld. In the late 1950s, Texas Instruments' Jack Kilby and Fairchild Semiconductor's Robert Noyce (one of eight defectors from Shockley's firm whom he scathingly called the "traitorous eight") had the same brainstorm. Almost simultaneously, they realized that any number of transistors could be etched directly on a single piece of silicon along with the connections between them. Such integrated circuits (ICs) contained entire sections of a computer, for example, a logic circuit or a memory register. The microchip was born.

Pascal: counting

Boole: solving

Shockley: resisting

Designers kept cramming in more and more transistors. Today, hundreds of thousands can be etched on a tiny silicon chip. The chips also began incorporating more circuits. But even such so-called large-scale integration had a drawback. With the circuits rigidly fixed in the silicon, the chips performed only the duties for which they were designed. They were "hardwired," as engineers say. That changed dramatically in 1971, when Intel Corp., a Silicon Valley company founded by Noyce after yet another "defection," unveiled the microprocessor. Designed by a young Intel engineer named Ted Hoff, it contained the entire central processing unit (CPU) of a simple computer on one chip. It was Babbage's mighty mill in microcosm.

With the microprocessor, a single chip could be programmed to do any number of tasks, from running a watch to steering a spacecraft. It could also serve as the soul of a new machine: the personal computer. By 1975 the first of the new breed of computers had appeared, a hobbyist machine called the Altair 8800 (cost: $395 in kit form, $621 assembled). The Altair soon vanished from the marketplace. But already there were other young and imaginative tinkerers out in Silicon Valley getting ready to produce personal computers, including one bearing an odd symbol: an apple with a bite taken out of it. Suddenly, the future was now.

—By Frederic Golden

How to "Write" Programs

Hardware is not difficult to understand. It is nuts and bolts and microchips. But what is software? Perhaps the easiest way to think of it is in terms of a simple analogy: hardware is to software as a television set is to the shows that appear on it. Computer programs, rather like those aired on TV, are a man-made effort to turn lifeless hardware into something one might want to spend some time with.

Programs, like television scripts, are "written"—not in English, but in English-like commands that vary from machine to machine. BASIC, for example, is a "language" most desktop computers are wired to understand.

In the past, computer owners had to write their own software. Today thousands of prewritten programs are on the market, ranging from games to accountants' tools. Running these software packages, as opposed to writing them, is no more difficult than playing a record or a videotape. Just find the appropriate disc, put it in a disc drive and push a button. In a matter of seconds the computer is programmed and set to do the job at hand—from balancing the books to finding misspelled words to playing a video game.

Making the programs, however, involves grueling and painstaking work, most of it done by a software engineer, also known as a programmer. Just what is it that a programmer does and how does he do it?

The first step is to decide what you want the computer to do—play blackjack, manipulate text, juggle figures? Once the task is clearly defined, the programmer lays out a step-by-step procedure for executing that task. Think of these procedures as roughly akin to cookbook recipes. The recipe for playing blackjack, for example, might go something like this: "Get a deck of cards. Shuffle the cards. Deal two cards to each player. Ask the first player if he wants another card. Did the face value of that third card put his total over 21? If not, ask if he wants another card . . ."

Once the task is set and the recipe spelled out, the programmer sits down at a computer and translates each step into commands that the machine can understand. A typical command might say: PRINT "DO YOU WANT ANOTHER CARD?"

The computer, interpreting commands one word at a time, recognizes the word PRINT and the quotation marks that follow it. It has been wired to gather up messages that appear between quotation marks and translate them, character by character, into sequences of numbers. These numbers, in turn, are translated into a corresponding sequence of electrical signals. These signals are sent to an electron "gun" housed in the vacuum tube behind the computer's video screen. This gun, following the sequence of signals, fires bursts of electrons at the back side of the screen. The electrons strike bits of phosphor that coat the screen and energize them, lighting up a pattern of dots. These dots form the shape of alphabetic characters, spelling out the message: DO YOU WANT ANOTHER CARD?

Thankfully, the programmer does not have to worry about every electron and phosphor dot. He has enough on his hands typing his commands into the computer and testing them to see if they do what he meant them to do. Even a program for playing blackjack can quickly grow to be hundreds of lines long, each line densely packed with convoluted commands and alphanumerical characters. If there is even one character out of place in those hundreds of lines, chances are the program will not work properly. These software "bugs," as programming mishaps are called, can take weeks to find. One bug in an AT&T program knocked out all long-distance telephone service to Greece in 1979. It was months before Ma Bell's programmers pinned down the problem.

When the programmer has thoroughly tested and corrected his work he stores it on a magnetic tape or disc, much as someone might use a tape recorder to store a noteworthy speech. A particularly useful or entertaining computer program might be accepted by one of the growing number of software publishers. They will copy the program onto blank discs and send them to computer stores around the country.

When a user slips his brand-new blackjack program into a disc drive and turns on his computer, the drive starts spinning the disc at a rate of hundreds of revolutions per minute. As the disc spins, a record-playback head moves across its surface, picking up the original programmer's typed instructions and loading them into the computer's memory. When the disc stops spinning—presto!—an exact replica of the program will be imprinted on the machine's temporary memory, all debugged and ready to deal the cards. Or, depending on the disc, proofread the term paper, balance the books or tell you to sell the hogs.

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*Source: Hansen, R.G., Wyse, B.W., Sorenson, A.W., The Nutritional Quality Index of Foods, AVI Publishing Co., Inc., Westport, CT 1979

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Bell System

The Hottest-Selling Hardware

A guide to the desktops, at prices from $99 to five figures

Choosing a computer, like selecting a spouse, can be a daunting undertaking. Hundreds of nearly identical models are out there, the packaging can be misleading, and once you make a choice, you are stuck with the family it comes with. The machines listed here, bestsellers in their price ranges, have attracted the largest communities of users, dealers, suppliers, programmers, publishers and writers. In most cases, the manufacturer's list price buys just the computer; a complete system can cost two or three times as much.

Under $1,000

Timex Sinclair 1000 ($99). This tiny toy is good for dipping one's toes into the micro revolution and not much more. It will play video games with boxy, black-and-white graphics and speaks only one language: BASIC. A buttonless "membrane" keyboard is well designed for learning the fundamentals of computer programming, but for written work it is a step down from the old typewriter. With 600,000 sold in 1982 alone, there is sure to be more software on the shelves soon. A more powerful model that speaks child-oriented Logo is expected out this spring.

Commodore VIC-20 ($299). Skillful packaging and aggressive marketing helped make this machine the surprise bestseller of 1982: between 600,000 and 1 million sold. The VIC has the only cut-rate keyboard suitable for touch typing, and when hooked up to a $110 telephone modem, it becomes an inexpensive electronic mail terminal. There have been software shortages, but more programs are being written to meet the new demand. The Commodore 64, a $595 version that packs the memory capacity of some machines three times its price, arrived late in 1982 and could be a big seller in 1983.

Atari 400 and 800 ($299 and $899). With 256 colors, four separate sound generators and built-in "missile graphics," the Ataris are the machines of choice for game players and game writers. The 800 has a keyboard suitable for touch typing, but writers would do well to look elsewhere for a first-rate word processor. Nearly 200,000 Atari 800s were shipped in 1982 and some 400,000 model 400s.

Texas Instruments 99/4A ($450). The sleeper of the year. In 1978, when it retailed for $1,100, it was a market failure of historic proportions. The company upgraded the keyboard, hired Bill Cosby to do its commercials and drastically cut prices. Sales exploded. T.I. shipped 530,000 in 1982, and at year's end was selling nearly 150,000 a month. Software has been slow to come, but now there is a generous supply of high-quality educational programs, and, for $380 extra, owners can get a spritely version of Logo. More will follow. With sales spurting, program writers say they are giving the machine a second look.

Epson HX-20 ($795). Although this book-size portable computer arrived late in the year, it is probably the hottest new machine in its class, shipping 7,500 copies in its first month on the market. It packs into one handy 4-lb. package a full-size keyboard, a screen that displays four lines of text, a cash-register-type printer, a microcassette tape drive and more built-in memory than any comparably priced machine. Its Japanese manufacturers say their intention was to "stand America on its ear." U.S. experts say they may have done just that.

DRAWING BY MODELL © 1980 THE NEW YORKER MAGAZINE, INC.

"Do you have one that can help me decide which is the one for me?"

TRS-80 Model III ($999). Back in 1978, Radio Shack, Commodore and Apple had the field to themselves, and Tandy–Radio Shack, with its nationwide chain of retail outlets, had more of the field than anyone else. A sturdy word- and number-crunching machine, the "Trash-80," as it is affectionately known, seemed to have a lock on the corner computer market. By year's end there were 300,000 Model IIIs in place. But the company has been overtaken by less stodgy competitors, and last year Tandy's share of the mid-range market fell from 13% to 10%.

$1,000 to $2,000

Apple II Plus ($1,330). The hardy bestseller of the late '70s is also the hardy bestseller of the early '80s: 700,000 have been sold; 270,000 in 1982 alone. With so many cheaper and more sophisticated machines available, why does the Apple II still hold the biggest slice of the $1,000-to-$2,000 pie? Software. More programs are available for this six-year-old machine than for any other single computer, some 16,000 in all. Also more user groups, more space in the computer magazines, more plug-in expansion units, more peripheral devices. It used to be that when something was done on a microcomputer, it was done first on an Apple II. Today IBM, Commodore and Atari are changing that.

IBM Personal Computer ($1,565). The top executive's Apple, this is the machine that put the stamp of corporate legitimacy on the computer revolution, and it quickly set industry standards in everything from operating systems to its no-nonsense instruction manuals. Although other machines have sold in greater quantities, the IBM is the computer of the year. Introduced in August 1981, nearly 200,000 were shipped in the past twelve months, winning it 17% of the market for mid-range machines. Already 1,000 programs are available for the PC, including games. Though IBM discourages using its machine as a toy (it charges $300 extra for color graphics), software programmers are busily translating all manner of playtime activities to run on the IBM PC.

Osborne 1 ($1,795). The first of the sewing machine–size portable computers, the Osborne 1 squeezes into a 24-lb. package a video monitor, a pair of disc drives and the two programs indispensable to businessmen: financial forecasting and word processing. Despite its eye-straining 5-in. screen, 55,000 Osborne 1 models were sold in 1982, bringing the total number shipped to nearly 100,000.

Over $2,000

Only growing small businesses and big corporate clients are likely to go after these computers, known in the trade as "professional work stations" and designed to hang at the branches of a network of similar machines. Price tags range as high as $10,000: Altos, Corvus, Control Data, Cromemco, Digital Equipment, Fortune, Hewlett-Packard, Nippon Electric, North Star, Olivetti, TeleVideo, Toshiba, Vector, Victor, Xerox and Zenith are among the biggest names in this upscale but increasingly crowded field. Even proletarian Apple is joining the crowd with its long-awaited Apple IV (code-named Lisa), due to be unveiled in mid-January. Lisa's probable price range: somewhere between $7,000 and $10,000. The Apple V (code-named Mackintosh), on the other hand, due out in mid-1983 and priced around $2,000, could be a true mass-market machine. —*By Philip Faflick. Reported by Robert T. Grieves/New York*

WHAT TO GET FOR THE PERSON WHO'S HAD EVERYTHING.

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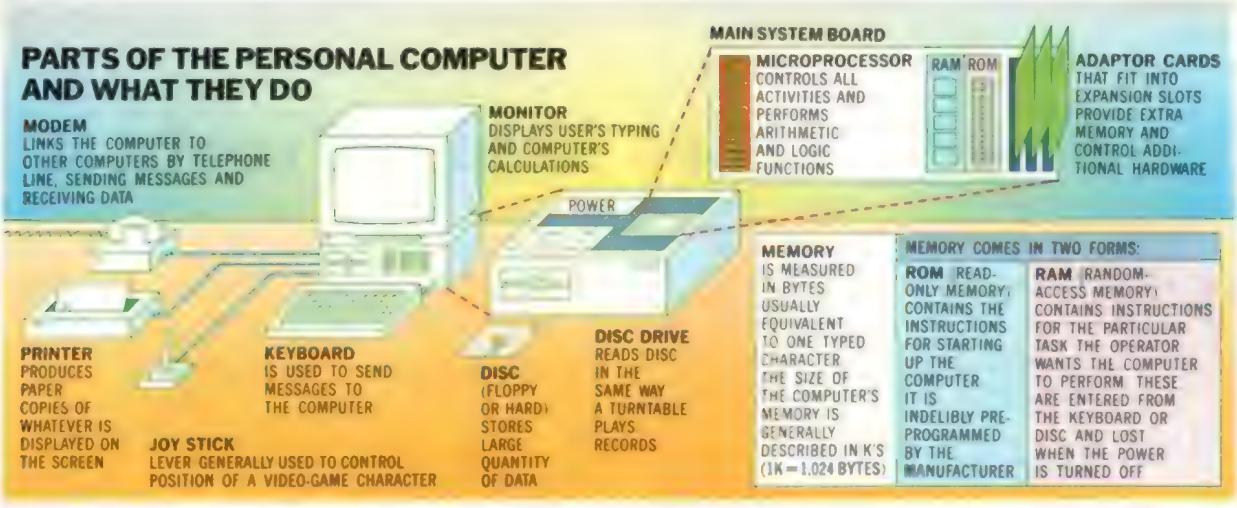


TIME diagram designed by Nigel Holmes, completely drawn and colored by Scitex CAS 2000 computer

Glork! A Glossary for Gweeps

Even users should grok this cuspy sampler of computerese

Since computers can understand only two words, variously defined as yes and no, on and off, or zero and one, computer scientists have devised a babel of "languages" that translate human wishes into some variation of the computer's two words. BASIC is the language of most desktop personal computers, originally written for Dartmouth students in the mid-1960s; FORTRAN is an earlier attempt used mainly for scientific problems; Logo is designed for children; and Ada is used mainly for military problems.*

While they were at it, the computer scientists began creating a jargon of their own, sometimes described pejoratively as computerese, to talk to each other. Like the high priests of any new religion, these keepers of the computer faith like to rename familiar things (How else could a TV screen become a monitor?). They like even more to give new things names that are as mystifying to an outsider as the secret password of an esoteric cult. Thus the computer's two forms of "memory" are known as RAM and ROM. The temporary memory, RAM, meaning "random-access memory," can easily be changed; the permanent memory, ROM, meaning "read-only memory," cannot be modified.

All clear? Those who think so are called "computer literate," which is synonymous with young, intelligent and employable; everybody else is the opposite. Any new technology requires its technical terms, of course, but computerese also reaches out with robot arms to seize ordinary words and twist them to its own syntactical purposes. The most striking example is the forced conversion of nouns into verbs. The computer-literate person has learned to access, to format, to interface. Anyone who objects to such jargon is, to the computer literate, not merely uninformed but bletcherous.

That odd word, which describes how a gweep feels when he meets a phrog *(see below)*, generally applies to anything so bad that the computerist cries out, "Bletch!" (the equivalent of the layman's "Yecch!"). This and much else can be learned from a remarkable work called *The Hacker's Dictionary*, which, as might be expected, is not a book but a computer printout that can be acquired only by accessing the right data base. The term hacker is itself an example, for underground languages like to reverse the connotations of words; in black English, for instance, bad means good. So hacker, a term of contempt in ordinary English, becomes high praise when computer fanatics apply it to themselves. As for anyone who simply employs a computer for some practical purpose and then shuts it off, the hacker derisively refers to him as a "user."

Assembled by a network of hackers at M.I.T., Stanford and elsewhere, who all keep adding contributions on their computers, the dictionary offers a Carrollian gallimaufry of inventions. Samples:

Crufty: poorly built, overcomplicated.

Cuspy: very good.

DWIM: do what I mean. A guess at what was intended by an inferior instruction. Also DTRT, do the right thing.

Frobnitz (plural: frobnitzem): an unspecified physical object, a widget.

Glork: mild surprise, sometimes tinged with outrage.

Grok: to understand; originally a Martian word in Robert Heinlein's *Stranger in a Strange Land*.

Gweep: hacker suffering from overwork.

Phrog: objectionable person, between a turkey and a toad.

Spazz: to behave erratically.

Other words that already exist outside the computer world have been given crisp new meanings. "Vanilla," for example, is now synonymous with ordinary. "Garbage collection" has been shortened to G.C. and turned into a euphemistic verb: "I'm going to G.C. my desk." "Rape" has broadened to mean violence to a program.

These images of trouble are ubiquitous in computerese. When the computer is doing nothing, it is described as catatonic; when it is working badly, it is said to be chomping or producing gubbish (a combination of garbage and rubbish); when it gets still worse, it is "pessimal," as any pessimist would know; when it gives off smoke, the program is considered fried; and when everything breaks down, that is called crashing. To complain about any of this is "to gritch."

This new language often displays a youthfully exuberant sense of the absurd. Thus "moby," meaning large, is said to derive from Melville's *Moby Dick*, though some say from Moby Pickle. And "bogus," which used to be squealed by Evelyn Waugh debutantes, has now flowered into bogosity, and even into autobogophobia, a fear of becoming bogotified.

Some of this wit can become exotic indeed, as in "the -p convention," which consists of adding the letter *p* to a word to denote a predicate. Thus "Food-p?" means "Are you hungry?" Or "State of the world-p?" might elicit a literal "Yes, the world is O.K.," but the hackers acclaim a nonsense reply: "Yes, the world has a state." The classic pun involves a hacker who wanted to know whether a neighbor would like to share a bowl of soup big enough to feed two and asked, "Split-p soup?"

In a category all by itself is "real world." The hackers define this with disdain as "the location of non-programmers" and "the location of the status quo."

—*By Otto Friedrich*

*Ada is named in honor of Lord Byron's science-minded daughter Ada, Countess of Lovelace, whose friend and collaborator Charles Babbage was the eccentric genius of the Analytical Engine. She also lives on in what is known as Lady Lovelace's Objection, which refers not to any romantic advances by Babbage but to the age-old question of whether a machine can be made to think. Objected Lady Lovelace: "The Analytical Engine has no pretensions to *originate* anything. It can do whatever we know how to order it to perform."

Four Who Also Shaped Events

Paying a High Price for Questionable Gains

BEGIN

If a single idea has dominated the thinking of Menachem Begin, it is his longstanding dream of restoring Eretz Yisrael, the biblical land that takes in not only the present-day Jewish state but also the Israeli-occupied West Bank of the Jordan River. In the pursuit of that dream, Begin got Israel into the most controversial war in its history and raised tensions between the U.S. and Israeli governments to a level unprecedented in more than a quarter of a century. Yet that did not diminish the stubborn Prime Minister's resolve. "No one will set for us the borders of Eretz Yisrael," he shouted in the Knesset after President Reagan proposed in September that the West Bank should in the future be linked to Jordan. Using the biblical names for the occupied territory, as he always does, Begin thundered: "Judea and Samaria belong to the Jewish people for all generations."

The Israeli leader, who is a product of Nazi persecution, Soviet imprisonment as well as the Zionist struggle for an independent homeland, demonstrated in 1982 that he is both a man of peace and a man of war. In April, fulfilling one of its obligations under the Egyptian-Israeli peace treaty, Israel removed its soldiers and settlers from the Sinai and returned the last of the territory to Egyptian sovereignty. Scarcely six weeks later, Begin and his Defense Minister, Ariel Sharon, sent the Israeli army into southern Lebanon, supposedly with the limited aim of dealing a fast, deadly blow to Palestine Liberation Organization guerrillas who were in a position to shell villages in northern Israel. Had Begin held to his initial, publicly stated objective of removing the P.L.O. from a 28-mile zone along the Israeli-Lebanese border, the invasion would have been hailed at home, and among Israel's remaining friends, as a great success.

Instead, he carried the war to the Lebanese capital. Israeli forces moved into the Christian sector of Beirut. They bombed Muslim-dominated West Beirut for most of the summer, contending that they were merely trying to flush P.L.O. guerrillas out of densely populated civilian areas. In what Begin called a "great, huge blow" to the P.L.O., the Israelis succeeded in driving more than 11,000 Palestinian fighters out of Lebanon, but at a terrible price: 462 Israeli soldiers had been killed, 2,218 had been wounded, and Israel remained caught in a military adventure that was tarnishing the nation's image around the world.

Obsessed as he is with the righteousness of his cause, Begin did not see it that way. In September, when Israelis learned about the massacre by Lebanese Christians of an estimated 800 Palestinians in two Beirut refugee camps, they reacted with anger and astonishment. Political leaders, including President Yitzhak Navon, demanded a formal investigation of the role that the Israeli army had played in allowing the Christian militiamen into the camps. In Tel Aviv, a mass rally of 400,000 Israelis, an extraordinarily large crowd for so small a country, protested Begin's refusal to launch an official inquiry. In his defense, the Prime Minister accused his country's critics abroad of committing a "blood libel" against Israel, and added, *"Goyim* kill *goyim*, and they come to hang the Jews."

At times, Begin, 69, seemed surprisingly out of touch. Although he finally gave in to pressure to appoint a commission of inquiry, he said that he did not learn of the Beirut massacre until almost 48 hours after the killing had begun. But he appears to be as tough and stubborn as ever; neither his chronic poor health nor the death in November of his beloved wife, Aliza, has led him toward any public thoughts of retirement. Nor does the Israeli electorate want him to retire. According to the latest polls, Begin still enjoys the support of 47.8% of his countrymen. This is down from 54% last August, but far ahead of the standing of any prospective challenger.

Putting the "Great" Back in Britain

For Prime Minister Margaret Thatcher, the year began inauspiciously. She had achieved the dubious distinction of being Britain's least popular national leader on record and her Conservative government had dropped to a humiliating 29% approval rating in opinion polls. The newly formed Social Democratic Party was running strong, and within her own Conservative Party there was considerable grumbling about her hard-line economic policies, which had brought high unemployment and an ever increasing number of bankruptcies.

But Thatcher wraps up her year a stunning winner, her iron-lady image polished to a high luster abroad, her stature as a political leader restored at home. It was a year that, thanks to a war 8,000 miles away, she will mark as a turning point in her fortunes. As a British businessman puts it: "In 1982 Prime Minister Thatcher restored our national pride." Her rating in the polls is up to 44%, and many Britons confidently predict that she would win an election handily if she chose to call one in 1983.

It was on April 2 that Argentine troops invaded the Falkland Islands, a remote and irrelevant British colony 400 miles off the Argentine coast. The House of Commons reverberated with cries of "Resign!" Thatcher boldly dispatched a task force, which grew to more than 100 vessels, to the windswept South Atlantic. It was a 19th century show of force against "a tinpot dictator," as the British haughtily described Argentine President Leopoldo Fortunato Galtieri.

Few, least of all the 8,000 troops who sailed to the sound of brass bands and cheering, anticipated the bloody battles that lay ahead. But all attempts at a diplomatic settlement failed, and war it was. It was an impressive late 20th century display of fighting for a principle—that a nation must defend its sovereign territory.

Catastrophe was always only an Exocet missile away, but Thatcher never wavered. "Failure?" she once asked derisively. "The possibilities do not exist." Seventy-four days later, the white flags of surrender were fluttering over the Falklands and victory belonged to Her Majesty's forces. Never mind that 255 British lives had been lost (750 to 1,000 for Argentina) or that six British navy ships and a merchant vessel had been destroyed. The triumph upheld both pride and principle, and with it came the so-called "Falklands factor" that lifted British spirits as well as Mrs. Thatcher's standing in public opinion surveys. For the first time in the Thatcher years, a major poll found more Britons optimistic than pessimistic about their country's immediate future.

THATCHER

As the Falklands factor wanes, Thatcher remains her self-assured self. Unemployment is 13.2%, the industrial base continues to shrivel and growth may not exceed 1.5% in 1983; still she boasts that her policies have brought the inflation rate down to 6.3%, the lowest in ten years. She continues to promise that she will "put the 'Great' back in Britain." Thatcher has taken on the powerful trade unions and thus far has not come a cropper. At the same time, she has staunchly resisted industry's pleas to soften her austere monetarism. She has also been lucky.

The Labor Party opposition is a shambles, split by left-right fratricide, and the Social Democratic Party's momentum has faded as fractious Britain united behind its resolute leader in the Falklands war.

A Thatcher associate, suggesting that the next election could turn on the contrast in leadership, observes: "This Prime Minister leads from the front, with her chin out." The man on the street puts it plainly: "She's gutsy." Even many of her numerous enemies acknowledge that the lady is a leader, even as they despair over where she is leading them.

Meanwhile, Thatcher, 57, looks ahead with a confidence she could not command twelve months ago. At the Tories' annual convention in Brighton this year, the slogan was THE RESOLUTE APPROACH, and no one doubts that in any election campaign Thatcher will trumpet her readiness to battle any comers, whether they be crusty trade union chiefs, Argentine generals or hectoring Commons members. And, as ever, she plans to prevail. When a close friend recently asked her, "Who will come after you?" she replied insouciantly, "After me—there's me!" No one thinks she is joking.

Bringing Inflation Under Control

No figure loomed larger over the world economy in 1982 than that of the 6-ft. 7-in. cigar-smoking chairman of the U.S. Federal Reserve Board, Paul A. Volcker. It was he who fought unflinchingly to bring down the U.S. consumer price spiral, but in the process he helped drive interest rates and unemployment up throughout the industrialized societies. In the U.S., his policies surprised skeptics by limiting the rise in the nation's consumer price index to roughly 5% in 1982, but his policies also helped push unemployment stunningly into double digits. By year's end joblessness was closing in on 11% of the nation's labor force, or 12 million individuals, a level that would have seemed almost unthinkable last January.

Although the Reagan Administration has been vocally committed to bringing inflation under control, waging this fight has fallen pretty much to Volcker, a 1979 appointee of Jimmy Carter's. Often erroneously characterized as a "tight money" policy, Volckernomics amounted to an ongoing effort by the Fed to slow the rate of growth of the nation's money supply, thereby choking off inflation at its monetary source.

As the economic slump that began in 1981 deepened during 1982, Volcker had to perform a delicate balancing act. The problem became how to ease up on the money supply, which the Federal Reserve had targeted to grow at a rate of about 2½% to 5½% during 1982, without frightening investors into thinking that the central bank was repeating an old mistake and reinflating the economy in response to political pressure.

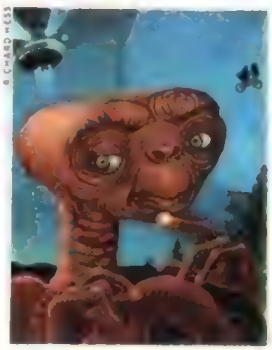
By midsummer, business failures had escalated alarmingly, the stock market had slumped to its lowest level in more than two years and fears of international financial collapse were spreading. Against this backdrop, Volcker hinted that he was prepared to act more flexibly, to permit monetary growth "somewhat above" the announced targets. Several quick cuts by the Fed in its discount rate to member banks drove home the point. As the money supply expanded and interest rates fell, Wall Street bought Volcker's act. Beginning in August, the Dow Jones industrial average staged a 288-point rally that peaked in early November, and the bond market boomed with it.

VOLCKER

Toward year's end, with the money supply growing at a superheated annual rate of more than 16%, critics argued that Volcker should slow the pace. When a Congressman tried to pin him down on what course he would take in 1983, the Fed chief made it clear he was no dogmatist: "You're saying, 'For God's sake, give us a simple rule that you can follow!' And I'm afraid I'm suspicious of any rule that is that simple."

It is not even certain that Volcker will be chairman of the Fed beyond next August, when his term expires. Should Reagan choose to reappoint him, Volcker would be faced with a big decision. The chairman of the world's richest central bank makes only $60,663 a year; he could doubtless command at least $500,000 if he left. It is almost ironic, but the banker who moves billions could use the money. A man of limited personal means, he lives in spartan $394-a-month bachelor digs in Washington during the week. On weekends he shuttles to New York City, where his arthritic wife Barbara lives with their son James, 24, a victim of cerebral palsy. She supplements the family budget by working as a bookkeeper. Despite the personal sacrifice, many hope that President Reagan will ask Volcker to stay on the job another four years, and that the 55-year-old Fed chairman will accept.

Making the Everyday Seem Unique



E.T.

He is 3-ft. 6-in. tall and 3 million light-years from home. His face looks like a cross between Carl Sandburg and a Galápagos turtle. He snacks on Reese's Pieces, and after a hard day he enjoys relaxing in front of the TV with a few cans of Coors. He walks like Charlie Chaplin in slow motion and, when excited, breathes like an asthmatic piglet. He wants nothing more in this world than a faithful pal, unless it is to return to his out-of-this-world home. Cynics will insist he is made of aluminum, steel, fiber glass, polyurethane and foam rubber, but this is a small matter. The larger truth is that E.T. emerged from a sweet communal dream: of fellowship, loyalty, ordinary heroism, unfettered fun. He is every child's secret best friend, every adult's reverie of the innocence that was, once upon our time.

He is also a magical money machine. As the unbilled star of Steven Spielberg's *E.T. The Extra-Terrestrial*, the little botanist from outer space has beguiled $310 million worth of U.S. moviegoers since June, easily outpacing the previous front runner, *Star Wars*. With December openings in foreign capitals, he is starting to duplicate that triumph around the globe. A novelization of Melissa Mathison's script has sold more than 3 million copies, an illustrated storybook another million. *Heartlight*, Neil Diamond's musical homage to *E.T.*, has sold more than a million albums since September. And, even in this recession-blitzed Christmas season, E.T. dolls were whisked off department-store shelves as fast as they could be flown in from Taiwan and Korea.

Virtually every blockbuster movie is a powerful fable of resilience. The audience finds vicarious strength watching Scarlett rebuild Tara, or Maria von Trapp spirit her brood out of Hitler's Austria, or Don Corleone take his cold-dish revenge. *E.T.* gives its viewers more, from less. Here is a fairy tale set in the most mundane of contemporary realities: a typical California suburb. The creature appears to his friend Elliott in a pizza-strewn backyard; he lives in a child's closet. As E.T. built his "phone home" device from old toys and household castaways, so Spielberg fashioned a dream world from the Formica-and-vinyl tatters of the American dream.

It is important to remember that *E.T.* is also a movie, crafted as expertly as if it had come off the NASA assembly line. Every character has his own quirky resonance; each scene is energized by grace notes that reward all those subsequent viewings. But Spielberg had proved his directorial skill before—with *Jaws*, *Close Encounters of the Third Kind*, *Raiders of the Lost Ark*—while tapping the moviegoer's sense of fear and excitement. This time, though, he touched something more than a nerve ending. With *E.T.* he proved that the everyday could be unique, and that the science fiction of movie technology could show us all the way home. Inside this runty extraterrestrial was the idealized heart of America, pulsing bright with humor and humanity.

"Not Our Finest Hour"

Congress jets home after a slapdash and slapstick session

On one side was Majority Leader Howard Baker of Tennessee, a believer in conciliation and consensus. On the other was a cadre of fervent right-wingers led by North Carolina's Jesse Helms, a maverick ideologue and veteran obstructionist. Ostensibly the issue was the 5¢ gasoline tax. But after six postmidnight sessions and four filibusters, the bitter battle became one over party power and personal pride.

In the end, six days after the special lameduck session of the 97th Congress was supposed to adjourn, Baker finally regained a moment of control over the cantankerous Senate and the measure passed. With that the Senators fled for home, as well they might, leaving behind the near debacle that the special session of Congress had become.

Supporters of the bill that tied up the Senate for 13 days said that the legislation, which will raise the federal gasoline tax from 4¢ to 9¢ starting April 1, would create 320,000 new jobs, extend unemployment benefits, help repair the nation's decaying highway and transit systems and cost the average motorist only $30 annually. It would also increase the maximum user fee for heavy trucks from $210 to $1,900 a year and permit the use of long double-trailer trucks on many state roads.

To Helms, the gas levy was a tax-and-spend heresy. Aided by his North Carolina colleague John East and two obscure Republican freshmen, Donald Nickles of Oklahoma and Gordon Humphrey of New Hampshire, Helms tried to talk the bill to death. The willful clique was able to delay a final roll call until Thursday, two days before Christmas, hoping that by then enough members would have gone home to prevent the Senate from mustering a quorum.

Baker retaliated by using a fleet of 11 military jets (each costing $742 an hour out of the Pentagon's budget) to bring Senators back for the vote and ensure them a quick flight home when it was over. Even Barry Goldwater, who was in an Arizona hospital recuperating from open-heart surgery, returned to Washington. "The sky was dark with Air Force planes bringing back Senators, kicking and screaming," Helms complained. Senators finally strangled the filibuster for good by an 81-to-5 vote, then passed the gas tax, 54 to 33. Baker, who had triumphed because of the reservoir of good will he had built up with both Democrats and Republicans, slipped back to his office to celebrate with a glass of champagne. He and Minority Leader Robert Byrd put in a joint call to the President to say that they had passed the gas tax, just as House Majority Leader Jim Wright and Minority Leader Robert Michel had done two days before.

The gas tax was not even part of the original agenda for the lameduck session, which was requested by President Reagan to prod Congress into passing the necessary appropriation bills for fiscal 1983, a period that began, of course, last October. The members bungled that task, the result being that 80% of the Government's funding needs had to be lumped once again into a catch-all piece of legislation called a continuing resolution. They did better when it came to granting themselves a pay raise and grabbing pork-barrel goodies *(see box)*. Said Oklahoma Democrat James Jones, chairman of the House Budget Committee: "This lameduck session was not our finest hour."

Yet the special session was not an unmitigated disaster. The passage of a spending plan for the rest of fiscal 1983, even though it was done through a continuing resolution rather than the formal passage of appropriation bills, marked the first time in three years that Congress had provided a full year of funding for the Government before adjourning for Christmas. President Reagan, while emphasizing that he was still "deeply troubled by the budget-making process," said of the lameduck session: "After taking all factors into account, I think this effort has been worthwhile."

A showdown over the continuing resolution was averted at the last moment when a House-Senate conference committee agreed to jettison a "jobs bill" that both chambers had attached to the measure. The Democratic House had voted $5.4 billion for the program, and the Republican Senate had approved a $1.2 billion figure. But Reagan, with much justification, argued that both versions were motley collections of local pork-barrel projects masquerading as jobs programs. He threatened to veto the entire continuing resolution, an act that would have shut down much of the Federal government last week, unless

Senate Leaders Baker and Byrd and House Leaders Michel and Wright give Reagan the good news that they are leaving town

the job amendments were scuttled.

When the congressional conferees met to work out a consensus on the continuing resolution, the "compromise" between the House's $5.4 billion program and the Senate's $1.2 billion program turned out to be a Reagan-pleasing goose egg. Republican Congressman Silvio Conte of Massachusetts put the matter bluntly to Democratic Congressman Jamie Whitten of Mississippi. Said Conte: "Christ, Jamie, why make us go through this? We'll just get a veto and be right back here." At a private conference that evening, the Democrats decided it was futile to provoke a confrontation that would close down the Government.

Members were particularly anxious to protect the pay raise they had given themselves for Christmas, which was likely to be lost if Reagan vetoed the continuing resolution. The 15% increase voted for House members, their first substantial raise in five years, was in fact long overdue. The main problem was one of timing, taking a pay increase when 12 million people are out of work. Said Congressman Leon Panetta of California: "It's the cherry on top of the pie to end up with a continuing resolution that has no money for jobs but a pay increase for Congress." The Senators sanctimoniously eschewed a salary hike (and thus will earn less than House members), but they opened the way for a flood of "honorariums" from special-interest groups by forbidding any limit on outside income for Senators. A $9,100 limit on outside earnings was due to go into effect next year and would have stopped the practice whereby some Senators reap more than $50,000 a year by giving speeches and making personal appearances.

Another significant decision in the continuing resolution was the deletion of $988 million for building the first five MX missiles. Reagan insisted when signing the spending bill that, under his interpretation of the wording, it permitted the Administration to build some of the new missiles by using funds earmarked for research and development. Said he: "The language of the conference report does enable us to keep to our schedule for initial deployment in 1986 once the Congress approves a permanent basing decision." But Congress's action seemed likely to cripple the homeless weapon. The lawmakers cut an additional $5 billion from the defense budget in a move that the White House did not publicly protest.

Congress also used the continuing resolution for some ill-advised meddling in foreign policy. One provision specifically renews a ban on any American-supported military activities designed to overthrow the Sandinista government in Nicaragua. The CIA has been arming bands of anti-Sandinista rebels based in Honduras. But the White House insists that it has been complying with this restriction and will continue to do so.

On the whole, however, the special session will be remembered more for what it did not do. Reagan's Caribbean Basin Initiative, designed to give trade breaks to Latin American countries, was ignored in the last-minute shuffle. The failure to enact a new law governing bankruptcy courts has left that system in legal limbo. A worthwhile immigration bill painstakingly worked out by the Senate and Administration, which attempts to regulate better the influx of alien workers, died in the House. The expiring Clean Air Act and Clean Water Act were hotly debated and amended, but Congress did not get around to a final vote on renewing them.

Above all, the raucous lameduck session forcefully illustrated the most significant problem Congress faces: the breakdown of its budget process. In 1974 Congress reformed the way it authorizes funds by instituting a system designed to force committees to reconcile their spending decisions with an overall budget resolution. Not since 1977, however, has Congress been able to complete the final stage in this unwieldy process, the passage of 13 formal appropriation bills. As a result, it must regularly consider a potpourri of programs all thrown into a catch-all continuing resolution with little time for detailed

Conte, left, and Andrews: contesting plums when no one is reading the fine print

Worms in the Pork

'T was the season to be generous, if not jolly, on Capitol Hill. In its pre-holiday dash toward adjournment, the lameduck Congress bestowed dozens of baubles, bangles and beads on the folks (and special-interest groups) back home. The result, fumed Silvio Conte, ranking Republican on the House Appropriations Committee, was "a Christmas tree."

Many of the ornaments came in the form of amendments to the continuing-spending resolution and gas-tax bill. Senator Howell Heflin, an Alabama Democrat, tucked in a $1 million appropriation for channel-widening at the Franklin Ferry Bridge in his home state. John Melcher, Democratic Senator from Montana, hooked a $243,000 fish hatchery for his, and Louisiana Senator Russell Long pushed through a $5 million clover-leaf project outside Baton Rouge. Even Senator William Proxmire, the Wisconsin Democrat, famed for his "Golden Fleece" awards for Government waste, rammed through a $1.5 million poverty-studies program at the University of Wisconsin and $100 million to have a Navy minesweeper built in his home state.

"The King of Pork," as North Dakota Senator Mark Andrews is known to colleagues, persuaded a House-Senate conference committee to reinstate a water-diversion project back home after it had been overwhelmingly defeated in the House. "Those guys knew damn well Andrews would stop their pet projects in the future," says Conte. "They ran like scared rabbits."

Cable-television operators, assisted by Georgia Senator Mack Mattingly (who was looking out for Atlanta Cable Magnate Ted Turner), got a reprieve from having to pay higher royalty fees on network programming. At the insistence of Kansas Senator Robert Dole, who was lobbied by the National Rifle Association, gun purveyors were exempted from recording sales of .22 cal. rimfire ammunition.

Why are end-of-session bills traditional targets for pork-barrel amendments? "They're the last trains out of the station," explained Massachusetts Congressman James Shannon. Normal debate and decorum were all but abandoned. Some of the Senate amendments to the omnibus spending bill were handwritten. Even after the Senate voted on the amendments, few members knew what action had been taken. When the final 300-page spending bill emerged from the House and Senate conference committee, pasted together and hastily photocopied, only 35 copies were circulated to the 435 House members voting on the measure. Not that it mattered. "By the end of the session," sighed Shannon, "no one wants to see any more fine print." ■

deliberation. Noted Missouri's Democratic Senator Thomas Eagleton of this session's continuing resolution: "On foreign aid we spent 15 minutes."

Another potentially debilitating problem for Congress was the breakdown in Republican unity. The acrimonious fight provoked by Helms left scars that will not heal quickly. "Right now, Jesse Helms couldn't get unanimous consent to wish his grandmother happy birthday," said Republican Senator Mark Hatfield of Oregon. During his filibuster, Helms was the recipient of one of the most scathing attacks in recent Senate history. It came from a member of his own party, the usually amiable Alan Simpson of Wyoming. Standing next to Helms, Simpson declared: "Seldom have I seen a more obdurate and obnoxious performance. I guess it is called hardball. In my neck of the woods we call it stickball. Children play it."

Next week the 98th Congress, which will be more liberal and Democratic than the one that staggered offstage last week, will convene. With 84 new members, it will have to get organized all over again. Some time in January, Reagan will send it his budget plan for fiscal 1984, with projections of another huge deficit, this one exceeding $150 billion. The President will be confronted with growing skepticism about his economic nostrums. Members are not likely to take gracefully such naive proposals for confronting unemployment as the one Reagan tossed out at a press conference last week: that there would be more than enough jobs for the 12 million currently out of work if each of the nation's 15 million businesses hired just one more worker. The President did not take into account the fact that three-quarters of these businesses are small owner-operated enterprises, most with receipts of less than $25,000 a year, that could not afford more employees, or use them. Taking a more realistic tack, Howard Baker has promised that the new Congress will take up a jobs measure similar to the one Reagan threatened to veto.

The efficient functioning of the incoming Congress will depend on the ability of moderate Senate Republicans, like Baker and Robert Dole of Kansas, to broker consensus policies acceptable to both Reagan and the House Democratic leadership. For this to work, Helms and his band of renegade Republicans must be controlled better than they were during the lameduck session. In addition, Reagan, who up to now has had great success in persuading Congress to do his bidding, must show that he also has the flexibility to work with the institution when it asserts more independence. Otherwise, the pendulum will swing from a Congress that once had blind faith in Reagan's policies to one that is blindly determined to stop them. *—By Walter Isaacson. Reported by Neil MacNeil and Evan Thomas/Washington*

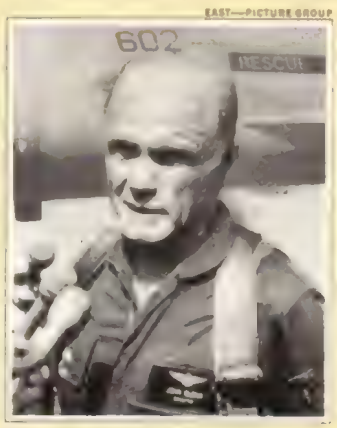
The Presidency/Hugh Sidey

The Melody of Democracy

The books, when they are written, may be titled *The Longest Campaign* or *One Primary Too Many*. If there is a martial ring to this Washington waggery, there is also an alarming truth. Political guerrillas for the 1984 election have assembled. They began probing ten months ago, a full year before Jimmy Carter did the same in his early-bird run at the presidency and nearly two years ahead of the traditional campaign kickoff. The upcoming presidential race will be the longest, most televised, most computerized, most numbing electoral spectacle in history. It could also be the most expensive, exceeding the record $275 million spent in 1980, if Ronald Reagan does not run and the Republican field crowds up with free-spending long shots.

Richard Scammon, the respected Washington political analyst, believes that in the next two years we will reach new pinnacles of political artistry. There will be more speeches that say less, more gimmicks, more fund appeals, more opinion surveys, more bad chicken than in any other campaign. Yet Scammon loves the thought. "I sit here at Christmas time," he said last week, "and hear the Soviet Union's Yuri Andropov tell the Soviet people what to think, while in the U.S. everybody and his dog is down in the public arena kicking each other around. It is wonderful. It is the melody of democracy."

Melody smelody. The fact is that boredom is going to be a major factor in this marathon. How do you make a fellow presidential and yet exciting? Gary Hart lets his brown cowboy boots stick out from under his gray pinstripes, a hint of the *hombre*. John Glenn took an F-16 fighter up for a spin over Texas, and in California "landed" the space shuttle in a simulator, both stunts tailored for the evening news. But boots and jets will not keep the audience interested for two more years. Hart is rehearsing some show-stoppers. In Los Angeles the other night to pick up $100,000 in new campaign money, he outlined what he would do in his first 100 days as President. One idea: fly to Geneva and lay a new nuclear arms reduction proposal in front of the Soviets.



Glenn with F-16: battling voter ennui

Scammon believes the long campaign (already 38 primaries and caucuses are scheduled) will subject the candidates to extraordinary scrutiny. Thus it will be important for Alan Cranston not to appear as old as he is (68), Glenn to appear a little taller than he is (5 ft. 10½ in.) and Fritz Hollings not to seem as Southern as he is (Charleston, S.C.). More experts than just Scammon believe the world's longest political race may be won by the man who is best at poking fun at himself. "They've got to kid their own eagerness," says Humor Consultant Bob Orben, who wrote for Bob Hope and Jerry Ford. Already Orben is spinning jokes about Glenn "peaking too soon" now that Ted Kennedy has withdrawn. Orben's business is booming. Without money, people can only laugh or cry, and they prefer laughter. Anybody who runs for office these days, says Orben, better have some good jokes. Just ask Ronald (have you heard the one about the pig with the wooden leg? . . .) Reagan.

Former Vice President Walter Mondale, the acknowledged front runner (150 speeches in 38 states in 1982), is hardly an electrifying campaigner, but he knows the value of political humor. Having bowed out of the 1976 race quipping that he could not face all those nights in Holiday Inns, Mondale now claims that the inns have been redecorated to his taste. The other day he was spotted in Miami with a huge cigar sticking out of his mouth at a rakish angle, looking like a Minnesota country boy imitating Groucho Marx. It will not work. Cigars are a bad symbol. We will see them less and less in photographs of candidates.

The greatest political show on earth begins formally in just two weeks. Yes, two weeks. Out in Sacramento they are having a Democratic state convention, and they have invited the presidential contenders to talk to the 2,100 delegates. Five of the big six (only Reubin Askew declined) accepted; Dark Horses Morris Udall and Dale Bumpers are galloping out. The media plan a mass assault. A couple of networks are scheduling straw polls of the delegates after the oratory. The way things are going, the anchormen that night may be ready to project a 1984 winner.

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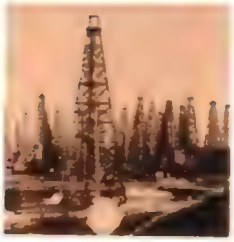

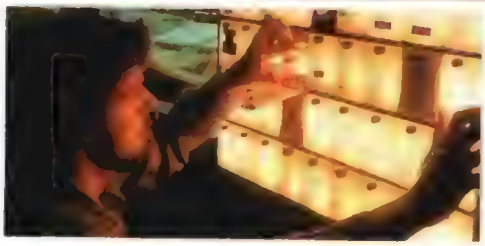

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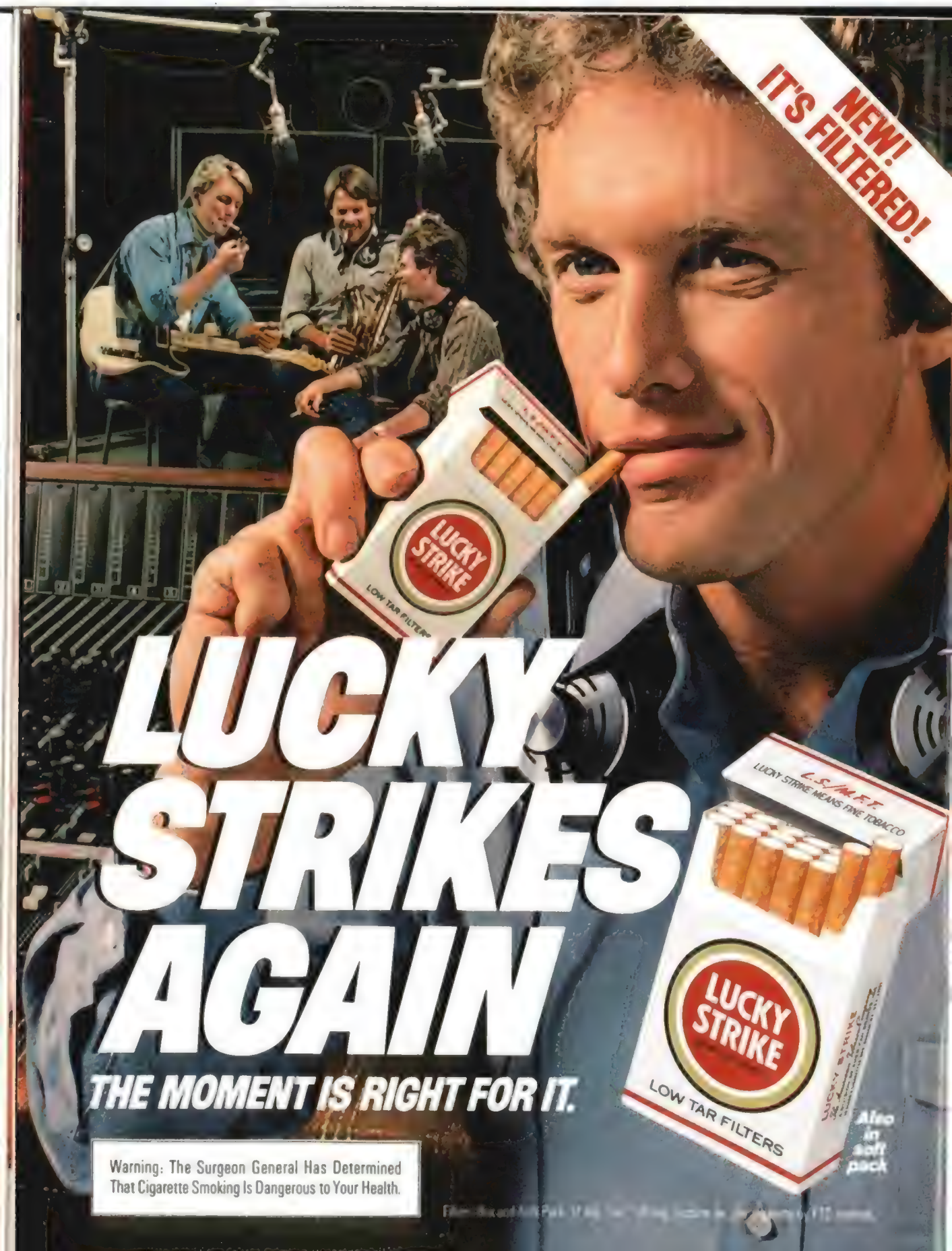
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A Birthday-Party Hangover

In Boston, corruption probes shadow the city's administration

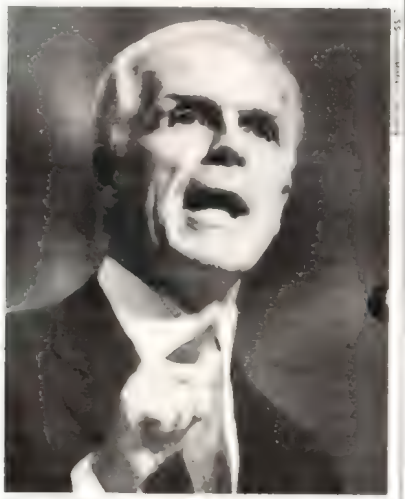
Boston's Mayor Kevin White, the feisty Irish Democrat, was the picture of livid indignation. He jabbed a finger toward the bold headlines in the Boston *Globe*, which charged that another scandal had been uncovered in the mayor's administration. Fumed White: "I shouldn't be sitting in this chair if that's true, not even for five minutes."

Despite the embattled performance, White did not, and could not, deny last week that a number of federal agencies and four U.S. grand juries are looking into allegations of financial misconduct by city officials. The probers include the FBI, the IRS, the U.S. Department of Housing and Urban Development, the Postal Service and U.S. Attorney William F. Weld, a Republican whom White accuses of being politically motivated. While the mayor has not been directly implicated, 13 city employees in the past two years have been indicted on various charges, including fraud and corruption. Two are doing federal time.

All of these developments, taken together, have cast a distinct pall over White's administration. After occupying office for 15 often tumultuous years, the liberal mayor may face his roughest fight ever if he seeks re-election to a fifth term next November. "I will not retreat an inch," insists White. "I will be heard."

Boston is certainly all ears now. One serious problem for White is a birthday party for his wife Kathryn that was scheduled for March 27, 1981, then hurriedly canceled. Some 400 individuals, many of them city employees and businessmen holding contracts with the city, had contributed at least $122,000, which was to be used to celebrate Mrs. White's 45th birthday.

White had told the Massachusetts ethics commission that he had no knowledge of who had donated the money or how much they had given. But, in a public letter, the ethics commission scolded White: "Individuals who never met your wife gave amounts greater than they would be expected to give their own wives . . . and in some occasions gave the equivalent of almost a month's salary." The commission said White's "hands-off" attitude was "unacceptable and insensitive" and that he had violated the state's standards of official conduct.



Mayor White in combative mood

"I will not retreat an inch."

The party was canceled, and White agreed to have the donations returned to the generous givers. But more party problems have arisen: last week the Boston *Globe* reported that one federal grand jury is looking into the possibility that some party donors, unwittingly or not, may have been participating in a sophisticated money-laundering scheme designed to conceal the true source of the money. Investigators found that 64 people who gave money to the birthday fund also made identical cash deposits in their personal bank accounts at about the same time, which suggested that they might have been reimbursed.

Another federal criminal investigation, this one by HUD, was reported by the New York *Times* to be delving into Boston's management of money received from Washington to rejuvenate deteriorating neighborhoods. A highly critical audit released by HUD this month claimed that the city had run up "excessive, unreasonable and improper costs" in a block-grant program, while failing to accomplish the intended goals.

The city, charged the HUD report, spent $5,015,572 from July 1980 to February 1982 on housing repairs but improved only 554 of the 3,498 homes scheduled for work in that period. The city also budgeted $4,893,248 to insulate and in other ways weatherize 3,142 houses but managed to fix up only 507. According to HUD, the city spent $4,138 a building on administrative costs alone. Also charging that contracts had sometimes not been based on open bids, HUD disallowed or questioned some $5.6 million of the more than $23 million in block-grant funds that Boston had received. The auditors further contended that $1.9 million given to the city for community development was actually used for other purposes, including unrelated municipal salaries.

While scandals and rumors of graft are far from new in Boston, the current round of allegations has the White team reeling. Admits one of the mayor's aides: "We're really under fire this time. It's coming from all sides." Summed up White last week airily: "I'd like this to be resolved. It affects our reputation." ■

Deaver enjoying a low-cal lunch

Belt Tightening

A White House diet

At black-tie dinners, he has been known to flop to the floor, tuck his knees to his chest and roll from side to side. He jokes about one day posing with Jane Fonda, both in leotards, displaying the fitness of their sleek bodies. He has signed a contract to write a diet book in which he will explain in detail his theory that if you drink and eat at the same sitting, you get fat because the liquid washes away digestion-aiding enzymes in the mouth.

Some nutty faddist hoping to cash in on the national hunger for books that help you get thin? Well, not quite. The man with such readiness to demonstrate his exercise techniques (in addition to body rolls, he suggests two types of sit-ups), and with imminent publishing plans, is Michael Deaver, the normally discreet and least noticeable of President Reagan's top aides. He recently lost 33 lbs. (from 183 lbs. on his 5-ft. 7-in. frame). He intends to reveal the details of his White House regimen for tightening belts, even as the federal deficit grows ever fatter, in a ghost-written book to be published by Morrow in the spring. His 1,500 calories-a-day diet stresses apple juice, grains and little alcohol.

Deaver is serious about his desire to show "people who have desk jobs, like me, people who are sedentary, how they can get slim and stay slim forever." The money must also have seemed tasty. Deaver, whose salary is $60,600 a year, was to get a $45,000 advance from the publisher. The bad news: the White House has a rule that no staff member can earn more than 15% of his salary a year from outside work. The good news: royalties are not covered by the rules. Deaver could yet end up in Fat City. ■

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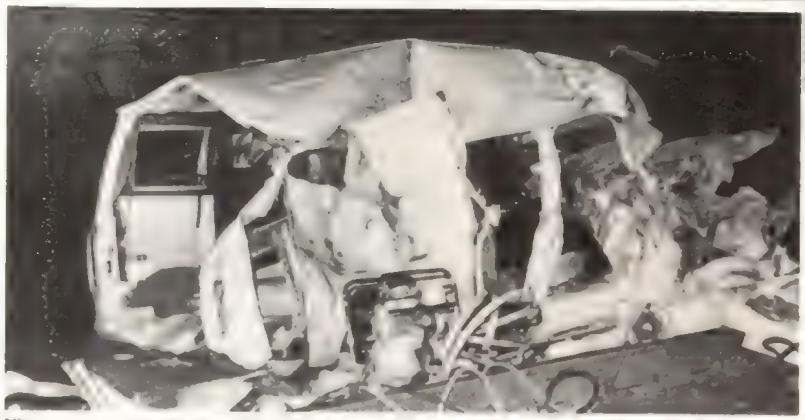

Nine young people died last March in this van, hit trying to beat a train in Mineola, N.Y.

Nightcap

Raising the drinking age

A decade ago, perhaps swayed by the battle cry "Old enough to fight, old enough to drink!" 29 state legislatures passed laws lowering the drinking age. But with an average of 5,000 teen-agers dying each year in drunken-driving accidents, the trend slowed down. Since 1976, 20 states have hoisted the drinking age back up by one to three years. The payoff has been dramatic: in at least eight states, a higher drinking age was followed by a 28% reduction in nighttime fatal accidents involving 18- to 21-year-olds.

In their 1983 legislative sessions, 26 states will consider proposals to cut off 18-, 19- and 20-year-old imbibers. Congress has warned that states failing to raise the drinking age may find their federal highway aid in jeopardy. Says James Burnett, chairman of the National Transportation Safety Board: "We've got to handle drunken driving at every age, but if we can't do it for our children, there is not much hope."

New Jersey is the latest state to return to 21. Governor Thomas Kean will sign the bill this week that was passed by the legislature over the bitter complaints of college students and tavern owners. Insisted New Jersey Assemblyman Martin Herman: "At this holiday time, there is no more important gift we can give than the gift of life." In Massachusetts, the American Automobile Association filed legislation to nudge the drinking age from 20 to 21. "Too often kids learn to drink and drive at the same time," said AAA Spokeswoman Kathleen Maurer. A Governor's task force in Texas has recommended that the 1983 state legislature raise the drinking age from 19 to 21. Said Department of Public Safety Director Jim Adams: "It's almost a Texas heritage to be able to drive down the highway with a beer in your hand. But we have an intolerable death toll."

Still, many elected officials are wary about pushing such bills through the statehouse. Wisconsin Governor-Elect Anthony Earl opposes the bill that will come before the state legislature this winter, calling it unenforceable. Says Earl: "I think there would be widespread disregard for a change to 21." Some educators dismiss raising the drinking age on the grounds that it fails to address the teen-age "attitude" problem. Says Faye Gordon, coordinator of a Brookline, Mass., project in the public school system that uses such devices as a quiz show called *You Bet Your Beer* to persuade teen-agers not to drink and drive: "These kids are drinking, and some are going to continue to drink even if you raise the legal age to 40." College students reiterate the same argument they used effectively in the early '70s. Protests Curt Pawlisch, a leader of a University of Wisconsin student government coalition: "We trust the 18-year-old to help provide defense, drive tanks and watch over missile sites, and he can't even have a beer."

Despite its critics, the nationwide campaign to raise the legal drinking age is in high gear. It is likely to be bolstered by the results of an authoritative study, to be published next year by Duke University, that surveyed the 48 continental states from 1970 to 1977. It found that drunken-driving-related fatalities among 18- to 20-year-olds increased 7% when the legal drinking age was lowered from 21 to 18. ■

Shattered Calm

A murder in Amish country

Crime and other "worldly" problems rarely touch the plain-living Amish and Mennonite residents of New Holland, Pa. Indeed, no one could recall any precedent for the violence against Naomi Huyard, a frail, friendly woman of 50. On the evening of Nov. 27, the Amish woman left her farmhouse and walked across the road to the home of John and Lillian Herr to store several boxes of cauliflower in a freezer in their garage. When she did not return, her sister became alarmed and notified neighbors, who called the police. After a three-hour search of the neighborhood, a state trooper found Huyard's partly nude body under a blanket in the bedroom of the Herrs' adopted son Jimmy. Bound and gagged, the 90-lb. woman had been suffocated and stabbed 16 times.

Jimmy, 18, was arrested and charged with the murder. At a preliminary hearing last week, Lillian Herr testified that a bloody knife found under a pillow in the bedroom was her son's. Jimmy, a lapsed Mennonite who had been paroled on a burglary charge three weeks before Huyard's death, denies killing her. Family members on both sides say that the victim and accused had no reason to dislike each other. "If somebody would have told Naomi that boy was there, she would have gone anyway," says Isaac Huyard, one of four brothers who live on nearby farms. Herr's mother says Jimmy was asleep when she left for work on the day of the crime. John Herr, 60, an industrial custodian, returned from work at about 6 p.m., an hour or so after Naomi Huyard left her farm. Herr fixed himself something to eat, and Jimmy came up from the basement a few minutes later. Herr asked his son to complete some chores. When word of the search party reached them, young Herr joined it. "He acted normal all evening," his father says.

The Herrs adopted Jimmy and his brother Raymond, 19, as toddlers, adding to three daughters of their own. Obedient as a child, the adolescent Jimmy came to scorn the Herrs' religious habits. After police picked him up several times on burglary charges, he was sent to a Mennonite-run youth village for three years. Back home at 16, he dropped out of high school, rented an apartment and took a job as a dishwasher. He later joined the Army but deserted after a few months. One friend said Jimmy was bored and frustrated by the confining atmosphere of the Amish-Mennonite community. "He talked a lot lately about wanting to find his real parents," the friend added. "Jim experienced a big void, and a lot of his problems stemmed from that void."

Jimmy Herr

The Huyard clan, who, like most of their Amish neighbors, drive horse-and-buggy rigs and wear homemade black garb, has cleaved to its faith and offered the accused killer forgiveness. As he painted a shed on his hilltop property, Isaac Huyard cited the Bible: "Resist not evil, but overcome evil with good." David E. Huyard, 75, Naomi's uncle and the family patriarch, suggested that the murder is symptomatic of a growing rebelliousness among Amish and Mennonite youth, who are taught to live peacefully and according to the Bible. "We're being tested and tried in many different ways," he says. "I believe we can survive. But I don't know how long." ■

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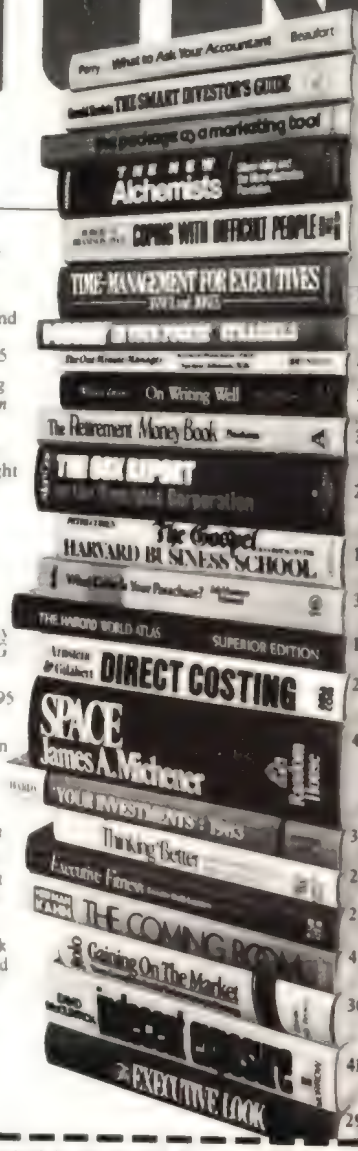

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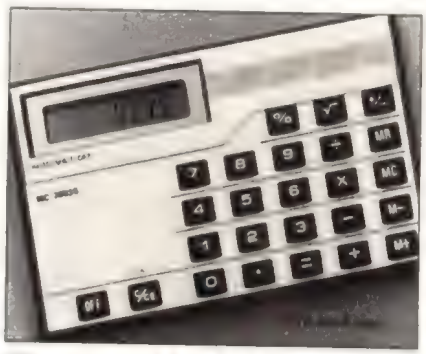

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Soul of a Hero

A rescue, phone call, new job

As the subway roared into the 14th Street station to take him back to his sparsely furnished Harlem walk-up, Reginald Andrews, 29, was deep in thought. Except for occasional work unloading produce, the father of eight had been unemployed for a year, and he was not optimistic about the job interview he had had that morning at Jamac Frozen Foods, a Manhattan food-delivery company.

Suddenly someone else's troubles grabbed Andrews' attention. Trying to board the train, David Schnair, 75, blind from an injury suffered in combat during World War II, was tapping a metal cane to identify an open door. But when he mistook a space between two cars for a door, he toppled onto the track. The train was about to pull out. "My mind left Jamac and Christmas for the kids," recalled Andrews. "I knew what I had to do."

Andrews jumped under the train and dragged Schnair, bleeding from a gash in his head, to a narrow cubbyhole beneath the platform out of the way of the wheels. The train began moving, but then screeched to a halt when a screaming bystander implored the conductor to stop the train. Andrews and Schnair huddled in the crawl space until the power was cut off and they could be hoisted to safety.

President Reagan, after reading a newspaper account of the rescue, telephoned his congratulations. "At first I thought it was Rich Little," said Andrews, who took the call in a storefront church next door because his own phone had been shut off for nonpayment. No less startled was Jamac Frozen Foods Vice President Edward Marbach. He also received a phone call from Reagan, who wanted to put in a good word for Andrews with a Jamac official. "I told him I'd already given him the job in my mind," recalled Marbach. (Andrews will report for work for his new $10,500-a-year truck-loader's position as soon as his knee ligaments, torn during the rescue, are healed.)

Subway Samaritan

Three days after the incident, an anonymous donor sent Andrews a $3,000 bank check to wipe out his debts. Andrews has a special sympathy for the blind; his sister lost her eyesight in a New York City subway robbery over four years ago. "If it had been my sister there," said Andrews, "I wouldn't want anyone to just stand around." Said Philip Mottley, a friend of Andrews': "It was not his body that saved that man's life. It was his soul." ■

Americana

A Big Parking Problem

On Dec. 3, Public Relations Director Chris Beardsley sent employees at Providence Hospital in Anchorage a memo warning them to be careful when walking to and from the hospital parking lot this winter. Said the memo: "Security officers have chased the moose away several times, but recently the animals have started chasing back. This adds a whole new dimension to the problem."

Indeed it has. The early winter's deep snows drove more than 500 hungry moose out of Alaska's Chugach Mountains and into Anchorage to forage for food. Normally shy creatures, moose tend to get ornery when hungry and are not readily moved by either cold reason or warm talk. At the hospital, a herd of seven moose, ranging in size from 350-lb. calves to half-ton adults, adopted the parking lot as their winter home. There they munched contentedly on recently planted shrubs; occasionally they charged at cars and employees. Hunting laws prevent forceful dealing with the problem.

"They think they own the place," said Beardsley. "They do." Employees still park in the lot, but cautiously wait in the lobby if there are moose around. Ray Kramer, a biologist for the state game service, has advised fellow Alaskans who encounter a hungry, charging moose to head for the nearest snowbank, cover up and pray.

Road to Ruin

It started as nothing more than a $5 speeding ticket, but by the time it was over, Daniel S. Murray, 34, of Billings, Mont., had been hit with history's most expensive speeding fine. Murray was flagged down for driving 68 miles an hour in a 55-m.p.h. zone on Sept. 3, 1980, and ordered to pay a $5 fine. The incensed motorist not only refused to pay up, he filed a lawsuit asking damages of $1,050,007. It charged Montana Highway Patrol Sergeant Ron Johnson with using unauthorized police powers and other infractions. Murray, an unemployed salesman who likes to do all his own legal work, also filed a series of 100-year liens against the property and financial assets of Johnson and his wife. In retaliation, the Johnsons not only filed a countersuit to remove the liens, but sought damages.

Last week the Montana Supreme Court upheld a lower court's finding of damages for the Johnsons: $200,000 plus attorney's fees estimated at $2,100. Serving notice that it would not stand for similar suits, the court said it hoped to "alert those inclined to follow the example of Daniel Murray—they may well be traveling a rocky road."

High Chair

On July 2, Larry Walters, 33, a TV production company driver, donned a parachute and strapped himself into an aluminum lawn chair to which he had attached 45 helium-filled weather balloons. From a San Pedro, Calif., backyard, he drifted three miles skyward, where he was spotted by two passenger jetliners. Walters shot out ten of the balloons with a BB pistol and floated down to earth after accumulating 90 minutes of flying time. Said he: "It was something I had to do to achieve inner peace."

Federal Aviation Administration officials did not share his peace. Last week they cited Walters for violating four sections of the Federal Aviation Act. Among them: flying an aircraft for which there is no airworthiness certificate. Complained Walters, who plans to fight the FAA's action: "If the FAA was around when the Wright Brothers were testing their first plane at Kitty Hawk, they would have never got up." Maybe, but air-safety officials might point out that passenger airlines were not flying in 1903. Said one: "A major catastrophe could have resulted." Walters faces fines totaling $4,000

TERRORISM

On the Bulgarian Trail

The Italian government goes public with explosive accusations

"It was a true act of war in a time of peace." In those extraordinary terms, Italy's Defense Minister Lelio Lagorio last week described new revelations concerning the attempt by a Turkish terrorist to assassinate Pope John Paul II 19 months ago. Lagorio was one of four ministers who, in the space of ten hours, appeared in Rome's ornate, 17th century Parliament to accuse Bulgaria, and by implication the Soviet Union, of standing behind Gunman Mehmet Ali Agca's failed effort.

The normally cautious Italian politicians exuded confidence that they possessed the evidence to incriminate, at the very least, the Bulgarian secret service. Although final proof is still lacking, the government's decision to go public with charges that had until then appeared only in the form of rumors and leaks in Italian newspapers has created one of the worst crises in years between a NATO country and a member of the Warsaw Pact. Foreign Minister Emilio Colombo announced that the Italian government had taken measures to reduce sharply Bulgaria's diplomatic presence in Rome and to make it harder for Bulgarians to enter Italy. He expressed concern that Bulgaria's action, if proved, would have grave consequences for East-West relations. Said he: "It would be difficult and dangerous to travel alone down a road that carries us to a conspiracy so complex and intricate."

The fact that Italian officials would make such explosive accusations aroused intense curiosity among Italy's allies. In the absence of detailed information about the evidence in Italian hands, most Western diplomats and intelligence officers remained cautious. The U.S. refused to make any statement supporting or denying the Italian charges. In Paris French Foreign Minister Claude Cheysson noted that "the Italians are serious people. [Colombo] would not have taken the steps that you know about if there had not been some Bulgarian elements involved."

The Italian charges prompted an emotional response last week from the Soviet Union. Leonid Zamyatin, spokesman for the Central Committee, angrily denied any Soviet or Bulgarian involvement in the papal shooting. He accused Western intelligence agencies and the Western press of conducting "a malicious campaign that has not a grain or iota of truth." Added Zamyatin: "If these insinuations continue, it will be seen as a deliberate campaign of aggravating world tension, an evil-minded campaign to discredit Bulgaria and the Soviet Union in the eyes of Catholics."

What had begun as mere whispers took on significance several months ago, when Agca, 24, an escaped Turkish prisoner who is now serving a life sentence in Rome for the attempted murder of the Pope, changed his previous story that he had acted alone. Instead, he said, he had been part of a conspiracy that involved at least three Bulgarian officials in Rome. Sergei Ivanov Antonov, 34, head of the Rome office of Bulgaria's Balkan Airlines; Zhelio Vassilev, 40, a former secretary to the Bulgarian military attaché in Rome; and Todor Aivazov, 39, an accountant at the Bulgarian embassy in Rome. In his speech to Parliament, Lagorio confirmed the details of Agca's confession. He also confirmed that the reputed Turkish arms and drugs smuggler Bekir Çelenk was a key co-conspirator. Çelenk, according to newspaper accounts, offered Agca $1.25 million to kill the Pope. The most dramatic corroboration seems to have come when investigators handed Agca a stack of unidentified photos. According to Lagorio, Agca unhesitatingly picked out the pictures of the three Bulgarians. Said Agca: "These are my accomplices." He also gave the police telephone numbers that matched those of the Bulgarian embassy and Aivazov's apartment. On the strength of Agca's accusation, the Italian police arrested Antonov, issued a warrant for Vassilev and officially implicated Aivazov. Antonov is being held in Rome, but the other Bulgarians are now safely in Sofia.

VITTORIANO RASTI

Defense Minister Lagorio addressing the Italian Parliament

What began as whispers takes on ominous significance.

As interest in the "Bulgarian connection" mounted, a second link hit the headlines. Newspapers had previously reported that Luigi Scricciolo, a former union official who was arrested in February and charged with assisting the terrorist Red Brigades, had been in contact with Bulgarian agents. Justice Minister Clelio Darida gave substance to that rumor last week when he accused Scricciolo of spying for Bulgaria "to procure with espionage aims political and military information on NATO." He further charged that Scricciolo had "aimed to establish a collaboration between Bulgaria and the Red Brigades," notably in the kidnaping of U.S. General James Dozier, who was rescued last January after being held captive for 42 days. Darida based his accusation in part on clandestine radio transmissions from Bulgaria to Italy that had been intercepted by Italian authorities. He also raised the total number of Bulgarians accused of subversion in Italy to five, naming two additional former embassy employees whom Scricciolo identified in a confession as his contacts. Their present whereabouts are unknown.

Now, however, a third case may yield the most decisive evidence to

An unusual press conference in Sofia: Rosica Antonov, wife of the Bulgarian arrested in Rome, flanked by wanted Bulgarians Aivazov and Vassilev

date of the Bulgarian connection. Four weeks ago, police in the northern Italian town of Trento cracked a drug- and arms-smuggling ring allegedly headed by Henri Arsan, a Syrian. Arsan's contacts, Lagorio told Parliament, definitely included Bulgarians, thereby offering possible proof that the ring represented a third tie between Bulgaria and subversion in Italy. Two days later, in an even more startling development, Trento Magistrate Carlo Palermo announced that Çelenk was being charged with complicity in the Trento ring. For the first time, the three separate trails leading from Italy to Bulgaria had met. Çelenk's testimony will be essential in proving the connection, but it may be impossible to obtain. He was, in the words of Bulgarian authorities, "under the control" of the police in Sofia. In Sofia, Çelenk said, "I have nothing to do with this odious crime. I am an honest businessman."

British intelligence officials remain skeptical about the Italian case, privately expressing doubts about the efficiency of Italy's secret service. West Germans note that any such Vatican operation would have been unusually sloppy, since the alleged agents would have been left in Rome for more than a year after the crime. Says a government spokesman: "It's just too unprofessional for the KGB." Some Italians think their government went too far. The ruling Christian Democratic Party's newspaper *Il Popolo* accused Defense Minister Lagorio, who is a Socialist, of "manipulating" the evidence against Bulgaria for internal partisan purposes.

U.S. intelligence officials are not so sure. Says one: "The circumstantial evidence seems overwhelming." The Reagan Administration remains divided on how to deal with any question of Soviet complicity in the papal plot. Officials fear that U.S. accusations would not be credible to Western Europe's influential peace movement, and therefore prefer to let the burden of proof rest with European governments. Says a senior official: "We should sit back and enjoy it." Washington intelligence sources told TIME that two weeks ago Soviet diplomats approached officials of the French Communist Party to find a lawyer for Antonov. Says one: "I don't think they are doing this because they feel sorry for him."

As Italian outrage mounted, the Bulgarians invited Western reporters to a dramatic press conference in Sofia, at which they produced the two Bulgarian embassy officials not in Italian custody, as well as Antonov's wife Rosica. A Bulgarian spokesman denounced the Italian accusations as "an international provocation," while Rosica, in tears, denied Antonov's involvement "with such inhuman acts." Bulgaria invited Italian Magistrate Ilario Martella, who is investigating the papal plot, to come to Sofia to interview the suspects personally.

Bulgarian agents have engaged in a number of dubious activities on behalf of the Soviet Union throughout the world. For years Western intelligence experts have believed that Bulgaria shipped millions of dollars worth of arms to right-wing terrorists in Turkey, helping create the anarchy that almost toppled the Turkish government in 1979. According to Israeli intelligence officials, more than 1,000 Palestinian terrorists have been trained in Bulgarian camps over the past decade, and all the heavy armaments used by the P.L.O. in Lebanon were shipped from the Black Sea port of Varna. Nicaragua's former Ambassador to the U.S. Francisco Fiallos Navarro last week revealed that Bulgarian advisers "have a very important role in economic planning in Nicaragua."

At every level, ties between the Soviet Union and Bulgaria are close, partly reflecting Bulgaria's longstanding gratitude for Russian help in expelling Turkish occupiers in 1878. Most Western intelligence officials agree that on international missions at least, the Bulgarians act only on direct orders from Moscow. The relationship between the KGB and its Bulgarian counterpart, says Stefan Sverdlev, a defector who was a colonel in the Bulgarian secret service until 1971, "is like that between master and slave." True as that may be, it does not constitute any proof of Soviet involvement in the Pope's shooting. Indeed, Bulgarian involvement has not been proved, but Italian authorities plainly feel their case is strong. —*By Kenneth W. Banta. Reported by Gregory H. Wierzynski/Washington and Wilton Wynn/Rome, with other bureaus*

Turkish Businessman Bekir Çelenk "under the control" of the Bulgarians

Accusations that he offered Agca $1.25 million to kill the Pope

SOVIET UNION

Point and Counterpoint

Andropov formalizes an offer, but the U.S. and its allies say no

Every one of the 5,000 seats in the Kremlin's huge, modernistic Palace of Congresses was filled as Communist Party General Secretary Yuri Andropov and his eleven colleagues on the ruling Politburo filed on stage last week. The new Soviet leader moved slowly to his place beneath a monumental bust of Lenin, turning to acknowledge Communist leaders who had come from as far as Cuba and Viet Nam to mark the 60th anniversary of the founding of the Soviet Union. Dressed in a smartly tailored blue suit and maroon tie, Andropov looked well-rested and healthier than he had five weeks earlier at the funeral of his predecessor, Leonid Brezhnev. But his sober demeanor suggested that he had reserved an important message for his first major televised speech to the nation.

As he delivered his address in calm, measured tones, it soon became clear that his words were truly directed to an audience outside the Soviet Union. He publicly confirmed an offer that Soviet negotiators at the Geneva talks on intermediate-range nuclear forces (INF) in Europe had only been hinting at in their informal discussions with U.S. diplomats. The Soviet Union, Andropov said, would be willing to "reduce hundreds of missiles" aimed at Western Europe if the NATO alliance reversed its decision to deploy 572 Pershing II and cruise missiles in five West European countries starting late next year. According to Andropov, the Soviets would keep in Europe "only as many missiles as are kept there by Britain and France, and not a single one more." He did not cite any figures, but arms experts interpreted the proposal as an offer to dismantle an estimated 280 SS-4 and SS-5 missiles and reduce the arsenal of SS-20s in Europe to 162, the number of ballistic missiles deployed by France and Britain.

Andropov, lower right, addresses his Kremlin audience

A skillful countermove to win over anxious West Europeans.

The alliance rejected the Andropov offer with near unanimity, though some members interpreted the speech as a possible signal that Moscow was ready to bargain. Within hours, U.S. State Department Spokesman John Hughes termed the proposal "unacceptable." It would, he said, leave the U.S. without a way "to deter the threat" of any remaining Soviet missiles targeted on Western Europe. In November 1981, Reagan had called on Moscow to dismantle all its intermediate-range arsenal in both Europe and Asia in return for a NATO promise not to deploy new nuclear missiles.

France and Britain were especially irritated by the Soviet attempt to include their nuclear forces in a broader NATO deal. Asked French Foreign Minister Claude Cheysson: "What does Mr. Andropov want, that we integrate ourselves into the Atlantic Alliance, that our missiles come under American control?" Although the British are less categorical than the French in their refusal to allow their nuclear force to be the subject of negotiations, Prime Minister Margaret Thatcher dismissed Andropov's offer as inadequate to "keep the essential balance which is required for our security."

Still, for all the public displays of Western unity, there was no doubt that Andropov had come up with a skillful countermove. The audience that most interested him was not Washington, Paris or London, but the large number of Europeans, especially West Germans, who are expected to put increasing pressure on NATO governments this year to back off from their deployment decision.

Western military analysts found many faults with the Andropov proposal, as beguiling as it might seem on the surface. They pointed out that Britain's 64 submarine-launched missiles and France's 18 land-based and 80 sea-based weapons were part of independent national defense forces and could not be counted on to protect West Germany or any other NATO member. The French and British missiles are not the equivalent of the SS-20, in either accuracy or number of warheads. Nor did the Andropov plan specify whether Moscow intended to dismantle any SS-20s or simply move them out of European Russia. SS-20s could be returned from locations in the east to within striking distance of Western Europe in a matter of weeks. The range of the SS-20: 3,100 miles.

Andropov's offer was accompanied by a thinly veiled threat. Said he: "It would be a good thing if thought were given to the grave consequences that the stationing of new U.S. medium-range missiles in Europe would have for all further efforts to limit arms control." Later in the week, Leonid Zamyatin, spokesman for the Communist Party Central Committee, hinted that if NATO deployed the Pershing II and cruise missiles, the Soviets could walk out of the INF negotiations. Said he: "What would there be to talk about?"

Andropov also repeated proposals made by Brezhnev. The Soviet Union, he said, was prepared to cut the number of its intercontinental missile-delivery systems by more than 25% if the U.S. agreed to do the same. Andropov specifically warned Washington against using the MX intercontinental ballistic missile as a bargaining chip in arms negotiations, one of the arguments Reagan has used for deploying the MX. According to Andropov, the Soviet Union would counter any such challenge by building similar missiles and was already testing its own version of the long-range cruise missile.

Washington was pleased last week by the show of unity within the alliance, but U.S. officials remained worried that the Soviet Union would try to use public opinion to win what it cannot get at the bargaining table in Geneva. The Andropov proposal has a superficial logic to it. If Reagan sticks to his position, known as the "zero option," he runs the risk of confirming a suspicion held by many Americans and West Europeans: that he is not seriously interested in arms reduction. Administration moderates have urged Reagan to show more flexibility at the negotiating table, but hard-liners insist that he should make no concessions to the Soviets. The question the President must soon resolve is whether he can afford to ignore the counteroffer that Andropov has now made. —*By John Kohan. Reported by Erik Amfitheatrof/Moscow*

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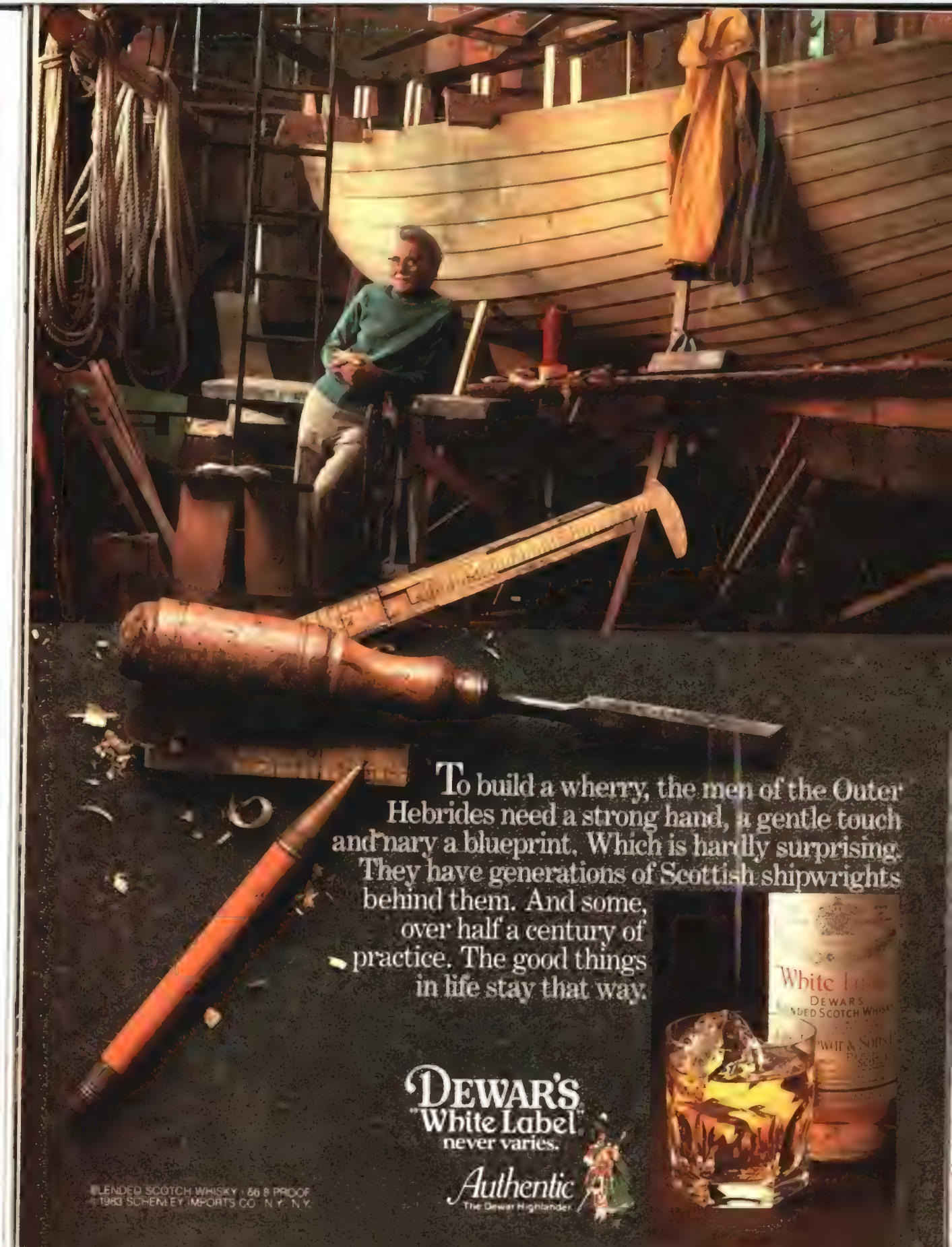
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Flanked by Shultz, Weinberger, Clark and other Administration officials, Reagan welcomes King Hussein to the White House

MIDDLE EAST

The King Says, "Not Yet"

Hussein demands Israeli concessions and the P.L.O.'s support

He is sometimes described by tabloid newspaper writers as "the plucky little King," but he is known to old Middle East hands as an accomplished tactician who has managed to hold on to the precarious throne of Jordan for the past 30 years. Last week King Hussein went to Washington for what the U.S. hoped would be a significant and perhaps historic meeting with President Reagan. There was a possibility that Hussein would announce, while still in Washington, that he was ready at last to join the Middle East peace negotiations that Israel and Egypt began in 1979. But it did not work out quite that way. Hussein told the President that he was not yet in a position to take part in the talks, although he held out the hope that he might soon be able to do so.

The King's position at first appeared to be a disappointment for the Reagan Administration. The President had hoped that his proposals of last September, in which he called for a future relationship between Jordan and the Israeli-occupied West Bank, would lead to broader Arab participation in the peace process. He had also been encouraged by the Arab summit conference at Fez, Morocco, later in September, when there seemed to be interest in some aspects of the Reagan plan. More to the point, the Arab summit, by guaranteeing peace for "all states of the region," went a long way toward acknowledging Israel's right to exist. Finally, the President was aware that Hussein and Palestine Liberation Organization Chairman Yasser Arafat had talked at length about future ties between the West Bank and Jordan.

The chief reason Hussein offered last week for his reluctance to join negotiations was that he could not be expected to make concessions at a time when Israel was aggressively pressing ahead with the expansion of Jewish settlements in the West Bank. In fact, the government of Prime Minister Menachem Begin may be quite pleased with the Arabs' continuing refusal to negotiate. This gives the Israelis an excuse to proceed with their settlements program and to denounce the Reagan plan, which the Israeli government has opposed from the beginning.

To Reagan and his Secretary of State, George Shultz, the signs had been unusually auspicious. Hussein had publicly interpreted the Fez summit communiqué as a tacit recognition of Israel. During the past year he had repeatedly advised the P.L.O. that no Middle East settlement was possible without recognition of Israel. He had also sought a mandate from Arafat to join the negotiations on the P.L.O.'s behalf. Administration officials noted that, even as Hussein was conferring with Reagan last week, a chief aide to Arafat, Khalid al Hassan, was staying at the same hotel as Hussein and was being kept informed of the discussions by the Jordanian delegation. For once, the signs of a genuine breakthrough appeared to be at hand.

In his talks with President Reagan, the King explained that he could join the peace process only if he had the support of the Arab League and the P.L.O. At the very least, he said, he needed the P.L.O.'s tacit "acquiescence," and he thought he could get it. He said he was encouraged by the support he was receiving from the moderate Arab states and from the Palestinians in the West Bank. But before he could make any final decision, the King told Reagan, Israeli forces would have to be withdrawn from Lebanon, and the U.S. would have to pressure Israel to modify its settlements policy in the West Bank. Hussein also tried to ascertain whether Reagan would remain fully committed to the proposals he advanced in September, even if it means opposing Israel in the midst of the 1984 U.S. election campaign. Reagan responded to Hussein that he was "deeply committed" to the plan.

Hussein also conferred with Defense Secretary Caspar Weinberger over his request for additional U.S. arms, including two squadrons of F-16 fighter bombers as well as air-to-air and antiaircraft missiles. The Administration was prepared to sell him the less advanced F-5G jet fighter (which, in a fascinating bit of bureaucratic legerdemain, has been renamed the F-20 to give it more sales appeal). But even this may prove difficult, given the sentiment in Congress against selling Jordan any new planes until it joins the negotiations. Nearly 60 Senators and 180 members of the House of Representatives have signed letters to this effect.

As it turned out, the President had some good news for his visitor: Israel and Lebanon had agreed to begin talks on the withdrawal of Israeli, Syrian and P.L.O. troops from Lebanon. The meetings, which will be held alternately in Khalde, south of Beirut, and in the Israeli border community of Qiryat Shemona, will deal with three issues: ending the state of belligerency between the two countries, making arrangements so as to keep any troops hostile to Israel out of southern Lebanon, and withdrawing the three foreign armies from the country. The Israeli position is that the removal of Israeli and Syrian forces could take place simultaneously, but only after the departure of the remaining P.L.O. units and the return of Israeli prisoners of war and the bodies of Israel's war dead. Lebanon would negotiate separately with Syria and the P.L.O.

After his four days in Washington, King Hussein flew home to consult with Arafat and other Arab leaders. He is expected to return to Washington within the next month for another round of talks. He hopes by then or, at the very latest, by the time the P.L.O.'s *de facto* parliament, the Palestine National Council, meets in Algiers in a few weeks, to have received from Arafat the "acquiescence" he feels he needs before joining serious negotiations. —***By William E. Smith. Reported by William Stewart/Beirut and Gregory H. Wierzynski/Washington***

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NICARAGUA

Job Vacancy

A loyal ambassador quits

Francisco Fiallos Navarro, 36, has been faced with a daunting task: defending the interests of Nicaragua's Marxist-led Sandinista government to a hostile Administration in Washington. For ten months the unassuming Ambassador to the U.S. performed the job loyally and, according to State Department officials, well. So well, in fact, that few people knew of Fiallos' growing misgivings about the onetime revolutionaries who hold power in Nicaragua. Last week, however, the Nicaraguan Foreign Ministry announced that Fiallos was being reassigned to other unspecified duties. Fiallos' version was that he had quit, becoming the second Nicaraguan Ambassador to the U.S. in two years to do so out of disillusionment with the Sandinista regime.*

The cause of the imbroglio was an example of just what Fiallos had been worrying about. In late November the Harvard-educated lawyer gave an unusually outspoken interview to Managua's independent daily *La Prensa*, in which he urged the Sandinistas to make a "dramatic change" in their policies if they want to maintain international credibility. But the government promptly banned newspaper publication of the interview, scheduled to appear Dec. 10. As Fiallos told TIME Correspondent Ross H. Munro last week, "During my frequent visits to Nicaragua, I saw the deteriorating situation in our country and transmitted my worries to the junta. I told them that they had to change course and win back the support of the people, but I realized that no matter what I said, and what other people said, things would not change."

Specifically, Fiallos had urged that the Sandinistas call "free, just and honest" elections. Although the increasingly unpopular government has promised to hold free national elections in 1985, many Nicaraguans doubt that it will. Fiallos also said that the Sandinistas should lift their nine-month-old state of emergency, which allows press censorship and arbitrary detention, and that they should end the "illegal and unjust" confiscation of property. Fiallos strongly defended the politically moderate Archbishop Miguel Obando y Bravo, whom he described as "one of the bravest men in Nicaragua." The prelate has been highly critical of the Sandinistas, although he still defends the spirit of the 1979 revolution that overthrew former Dictator Anastasio Somoza Debayle. Said Fiallos in the suppressed interview: "The revolution began with a social transformation based on a love for the people. Nevertheless, some fanatical sectors have introduced hate into it."

Fiallos' remarks echo those of many other critics, but they were particularly stinging to the Sandinistas because the diplomat was for several years a loyal revolutionary. A deeply religious man with close personal ties to Obando y Bravo, he secretly joined the Sandinista National Liberation Front in 1978, when the movement was still an armed underground force. During the anti-Somoza insurrection, he secretly stored and transported arms for the guerrillas' organized clandestine rebel meetings. Washington has authorized Fiallos, who has not yet decided whether to return to Nicaragua, to stay in the U.S. indefinitely. Said he last week: "For the moment I want to rest and think and then I will decide what course to take." ■

Ex-Ambassador Fiallos in Washington

A suppressed call for "dramatic change."

*The first was Banker Arturo Cruz, who resigned in November 1981, after the Sandinistas imprisoned five local entrepreneurs for criticizing government economic policy

Beach Inferno

Dawn was breaking along Venezuela's coastline as workers began the routine task of unloading an oil tanker at the Tacoa Arricifes generating plant, 20 miles northwest of Caracas. Suddenly and inexplicably, a half-filled storage tank onshore caught fire. Ignited, the 20,000 tons of fuel already in the tank turned the site into an inferno. As hundreds of rescue workers converged on the scene, superheated gases in the same tank erupted, trapping rescuers in a curtain of fire. Then, 17 hours later, a second tank nearby exploded. In the searing heat one fire engine reportedly just melted; balls of fire rising 100 ft. into the air knocked a police helicopter into the ocean. Said Oscar Machado Zuloaga, president of the Caracas Electricity Co.: "It was as if a giant flamethrower was being operated."

More than 1,000 police and firemen battled the blaze for three days before bringing it under control. The toll: at least 145 dead, including 43 firemen, and 500 injured. Damage may run as high as $4 million. In Caracas, which depends on the plant for 50% of its electricity, Christmas lights were dimmed and elevator use was curtailed. President Luis Herrera Campins maintained a round-the-clock vigil, and on the country's beaches where holiday crowds traditionally revel, somber Venezuelans respected a three-day mourning period by singing public funeral Masses.

A "giant flamethrower" in action: smoke rises from the burning tanks of the Tacoa plant

POLAND

"The Ideals of Solidarity Remain"

Life under martial law: hard times and disillusion

One year ago this week, Poles were still adjusting to the rigors of martial law. They could not travel, make telephone calls or receive uncensored mail. More than 5,000 people were interned, the independent Solidarity union was suspended and its leader, Lech Walesa, was being held at a government complex outside Warsaw. During twelve months of martial law, General Wojciech Jaruzelski has succeeded beyond most people's expectations in crushing the overt opposition to Communist rule in Poland. As a sign of its self-confidence, the government last week announced that it was releasing all but seven of the estimated 200 people who were still being held under martial law. But Jaruzelski had also hoped to persuade a majority of Poles that martial law would pave the way to a better life through a process of gradual reform. To assess how martial law has affected the lives of individual Poles today, TIME *Eastern Europe Bureau Chief Richard Hornik spent some time with a farmer, an intellectual and a factory worker. He reports:*

Miroslaw Macierzynski, 30, is a farmer in a village 45 miles south of Warsaw. On his twelve-acre farm he grows potatoes, wheat and fodder for his three milk cows and two plow horses. He would rather move to the city and get a job as a mason, but his wife Ewa thinks the country life is better for their two sons.

Although the government has raised food prices by up to 400%, Miroslaw has seen little of that increase. Says he: "I sell the state my milk because otherwise it would spoil." But even with the money they have, things are difficult because village stores are poorly supplied. Says Miroslaw: "There are no shoes for my boys or tools for my farm. When I was young, I believed that if you worked hard you could do anything. Now I am disillusioned."

Macierzynski on his farm near Warsaw

Under martial law, farmers were supposed to receive coupons giving them special access to such essential goods as coal. But, like many reforms, that has not worked. Says Miroslaw: "I have coupons for 1,500 lbs. of coal, but I still have not got any, and winter is just beginning." Miroslaw thinks that farmers and workers may now cooperate more. One way is through barter: "Miners bring their coal and trade it for our potatoes. We want to be as independent of the state as we possibly can. Unfortunately, we cannot make our village into an independent republic."

Like most Poles, he believes that the only thing martial law accomplished was to crush Solidarity. In his village it was hard to see any evidence of a "state of war," Jaruzelski's term for martial law. Says Miroslaw: "Here you do not really sense martial law. We did not have tanks or soldiers warming themselves by roadside fires. And a curfew in a village is ridiculous. Who could enforce it?"

Miroslaw has not seen much change among his countrymen either. "Deep down in people's hearts the ideals of Solidarity remain," he says. "They cannot be suppressed for too long, and when the occasion comes they will rise up again."

Maciej Wierzynski, 45, was one of Poland's leading television personalities, the host of *Studio Two*, a popular Saturday-night mix of entertainment and conversation. Now, as he drives around Warsaw in his battered 1979 Zastawa, he is the city's best-known taxi driver.

On the morning of Dec. 13, 1981, Maciej turned on his radio to hear the announcement that martial law had been imposed. Within hours he, his pregnant wife Ewa and their son Grzegorz, 3, had moved to a relative's apartment. As an official of the Liberal Polish Journalists' Association, Maciej quickly realized that he was a candidate for internment. The police never came, even after the family returned to its own apartment following the birth of their second son. A few weeks later, while being interrogated during the "verification," or purge, of Polish television, one official even hinted that he could have his old job back. But Maciej and Ewa, 32, a feature writer for the respected weekly *Kultura*, had already decided that they were no longer interested in being journalists in Poland. Both of them had worked through the 1970s writing pieces filled with allusions and double meanings, trying to slip some truth past the censor. The 16 months of Solidarity's existence had been an exhilirating journalistic experience. Says Maciej: "It's hard for me to imagine working again like before August 1980."

Former TV Host Wierzynski with his taxi

Psychological rewards, no moral superiority.

Driving a taxi is a tough and demanding job, but, he says, "my car was the only investment I had." By working seven days a week, Maciej manages to equal his previous salary of roughly 24,000 zlotys ($279) a month. Ewa still receives maternity-leave benefits, and family members in the West help as well. The price increases of the past year make it difficult to maintain their previous standard of living. But, as Ewa says, "there really isn't anything to buy anyway."

Still, there are psychological rewards. Total strangers who see Maciej driving his cab come up to him and congratulate him for not collaborating with the regime. Former colleagues who have stayed in journalism try to excuse themselves by saying that they are working to change the system from within. "It is really rather pathetic," says Ewa, "because in the next breath they add that they have to do it to support their families." Nonetheless, Maciej and Ewa stress that neither of them feels morally superior because of the choice they have made.

The Solidarity era had offered some prospect of a better future. Says Ewa: "I would not have had another child if I hadn't thought there was reason for hope." The couple named their baby Lech.

Eugeniusz, 36, was a Solidarity member in a textile factory in Lodz, 85 miles southwest of Warsaw. Although he was not a union leader, the factory management tried to fire him last March because he would speak out against the plant's shoddy management. Eugeniusz, who does not want his last name to be used, kept his job thanks to a successful appeal, but the experience chastened him. "Everyone is unhappy with the situation here, but they remain silent because of fear," he says. "How can there be any kind of re-

form when people cannot speak out and the authorities will not listen?"

As in most Polish families, Eugeniusz's wife Grazyna, 30, also works. The 7,500 zlotys ($87 at the official rate) she earns each month as a supervisor in a warehouse, together with the 9,500 zlotys ($110) he brings home from his job as a foreman at the textile plant, barely enable them to make ends meet. Because of the price increases that followed the imposition of martial law, Grazyna says, "it is very hard to get from the first of the month to the first of the next one. We have not bought any clothes at all this year, and to live we must dip into our savings."

Eugeniusz and Grazyna live with their son Mariusz, 10, in a one-room apartment in a 50-year-old building. They must share the bathroom, which is down the hall, with other tenants on their floor. Yet they consider themselves fortunate. Says Grazyna: "In the '70s, when we got married, it was still possible to buy furniture and appliances. I really admire any young couple starting off now. They have nothing, and no hope of any improvement."

Grazyna usually leaves work at 3:30 p.m. She spends the next three hours standing in lines for everything from meat to fresh bread and sweets for her son. The family is entitled to about 16 lbs. of meat a month, and much of that is low-quality cuts or sausage. During the week, dinner consists of soup or eggs. Says Grazyna: "We save the real meat for the weekend."

Although the government continually proclaims that the country has produced 30 million tons more coal under martial law than during the period that Solidarity existed, Eugeniusz's family has yet to receive any for this winter. With temperatures already dropping below freezing, the only warmth in the high-ceilinged apartment comes from a small electric heater. Neither Eugeniusz nor Grazyna have much hope that the situation will improve. "Things might be better when our son is our age," says Grazyna, "but I do not see how." ■

Factory Workers Eugeniusz and Grazyna

WEST GERMANY

Bad Omen

A warning for Kohl

A funereal pall hung over the wood-paneled conference room of the headquarters of the ruling Christian Democratic Party in Bonn. Even Chancellor Helmut Kohl's characteristic good humor had given way to a gloomy frown as he contemplated the party's surprising defeat the previous Sunday in local elections in the city-state of Hamburg. It was the last test of strength before the national elections Kohl plans to hold on March 6 in hopes of winning a mandate for his three-month-old conservative coalition government. Said the conservative daily *Frankfurter Allgemeine Zeitung:* "The result is both a disappointment and a warning. The election will not be as easy as many imagined."

Against all predictions, the opposition Social Democratic Party won a decisive 51.3% majority in Hamburg, up from 42.7% in the election seven months ago. The Christian Democrats dropped to 38.6% from 43.2%, while the environmentalist and pacifist group known as the Greens receded to 6.8%, from 7.7%. Since the Social Democrats did not get a working majority in the June election, Mayor Klaus von Dohnanyi tried forming a coalition with the Greens to run Hamburg. The attempt failed, and because the Social Democrats did not have the majority required to govern on their own, new elections were required.

Last week's vote was especially shocking for Kohl's coalition partners in Bonn, the Free Democratic Party. Once the pivotal third force in West German politics, the Free Democrats slipped to 2.6%, from 4.9% in June, prompting Bonn's daily *General-Anzeiger* to compare it to "a Christmas tree with no needles on its branches." The party's Hamburg debacle indicates that it is in danger of falling under the 5% minimum necessary to qualify for parliamentary seats. If that happens in March, the Free Democrats will be useless to Chancellor Kohl as a coalition partner. The Christian Democrats and their allies, Bavaria's Christian Social Union, would have to win an absolute majority to stay in office.

Willy Brandt, 69, chairman of the Social Democrats, jubilantly described his party's victory last week as a rejection of Kohl's coalition, which came to power on Oct. 1 when the Free Democrats switched allegiance from the coalition led by former Chancellor Helmut Schmidt. A hometown hero in Hamburg, Schmidt had campaigned hard, accusing the Free Democrats of "betrayal." Kohl was chastened but not discouraged by his party's setback because Hamburg has traditionally been a Social Democratic stronghold. Though it would be premature to judge as the start of a nationwide trend, the opposition's return to power in Hamburg, it is an omen Kohl would do well to heed. ■

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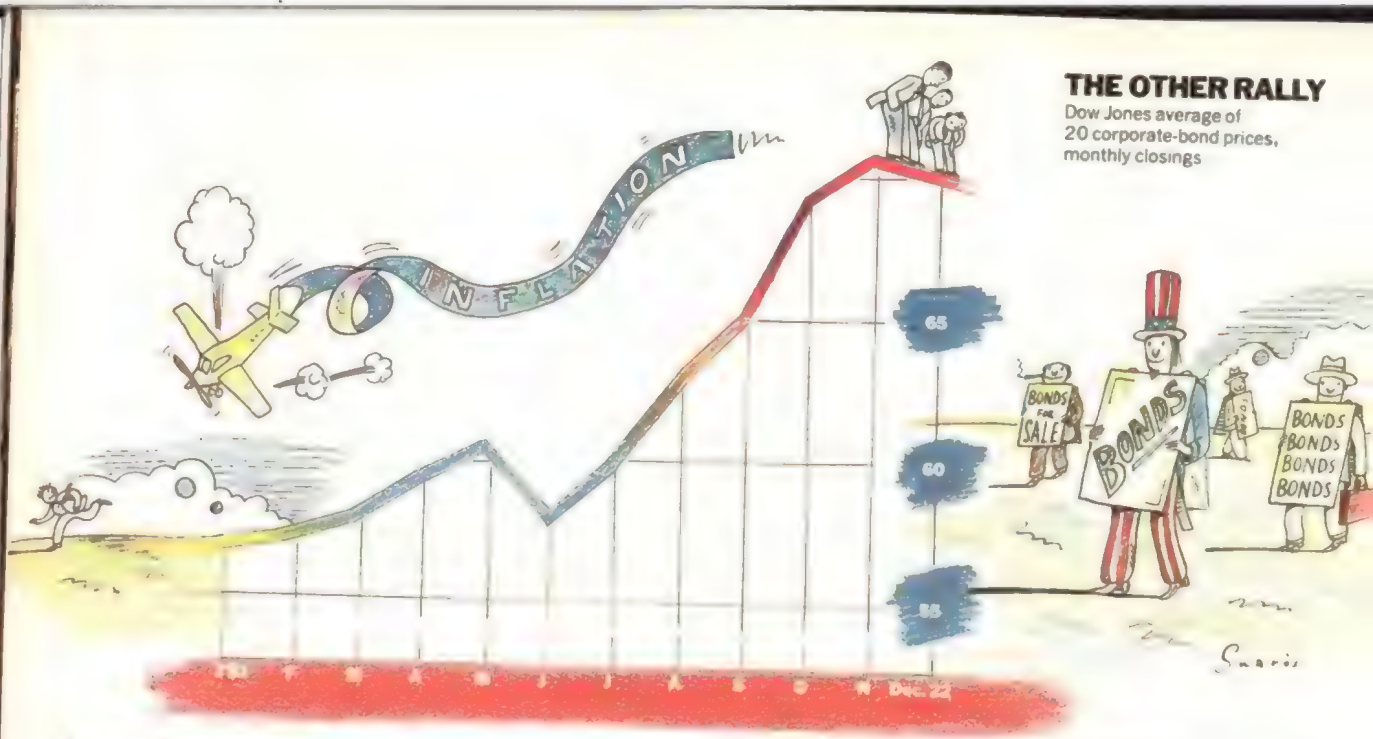

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Economy & Business

Pause in the Bond Boom

Inflation fears could snuff the investment rush to fixed-income securities

When it comes to making big money quickly, thoughts of investing in bonds have not traditionally leaped to mind. Then came the summer of 1982, when declining interest rates gave the nation's $2.3 trillion bond market a spectacular lift-off, making born-again believers out of a generation of battered bondholders.

Though the stock market rally was better publicized, overall returns, counting capital gains as well as interest, made the 1982 surge in everything from U.S. Treasury securities and corporate bonds to municipal bonds sold by state and local governments equally impressive. Investors racked up gains that approached 35% for ultra-safe investments in U.S. Treasury bonds and notes, with the rise in corporate and municipal bonds not far behind. The generous returns result when interest rates drop because bonds issued earlier at higher rates automatically become more valuable and shoot up in price.

For businessmen as well, the surge was gratifying. In recent years they have been borrowing heavily on a short-term basis to finance long-term projects, a practice that Henry Kaufman, the celel credit market analyst at the New investment banking firm of Salomon Brothers Inc., describes as "a little like trying to finance the building of one's house with short-term loans." Since the cost of most of that money has floated with the fluctuations in short-term interest rates, businesses have found investment costs hard to estimate in advance and have got burned as rates soared. Now that long-term rates are at last dropping, Kaufman predicts that corporations will sell a record $65 billion in bonds next year, up from $40 billion this year.

Yet hardly had 1982's bond market bulls had a chance to tot up their winnings when much of the euphoria that accompanied the rise in bond prices began to fade. Prices have begun to weaken ever so slightly, and interest rates have started to nudge upward. Reason: fear is spreading that inflation, a mortal menace for all fixed-income investments, could resume with a vengeance if the economy comes out of its doldrums. Says Raymond Dalio, president of Bridgewater Associates Inc., a Connecticut-based economic and investment consulting firm that was strongly bullish on bonds last winter and spring but is much more cautious in outlook now: "We think there is perhaps some rise still to go for bond prices. But the big gains are over."

For the nation's weak and troubled economy, the bond market's sudden jitters could not have come at a worse time. Interest rates have dropped dramatically since last summer, when even the highest grade corporate bonds yielded close to 14%. But triple-A corporate bond yields still hover above 11%, and lower rated issues provide yields substantially higher. Those are levels that many economists feel are far too high for sustained economic recovery.

In fact, so-called real interest rates, which reflect the cost of borrowing minus inflation, have actually increased slightly during the period because inflation has fallen faster than interest rates. Says C. Fred Bergsten, director of the Washington-based Institute for International Economics: "Interest rates must drop by two more points. It is critical for the U.S. and world recovery."

Bond buyers are demanding the high rates because they see so many things happening that could reignite inflation. They fear, for example, that Washington's free-spending politicians will do little to prevent a new price surge, leaving the fight once again to the U.S. Federal Reserve, which has carried the burden almost alone since 1979.

In particular, investors saw the congressional lameduck session just ended as yet more proof that the Government remains hopelessly incapable of reducing the nation's ever swelling budget deficit. Last week alone the Treasury issued $26 billion of bills and notes to help feed the Government's craving for cash, and the needs will grow as the federal deficit heads to a record $165 billion this fiscal year. One Treasury aide describes the borrowing outlook for early 1983 this way: "You can think of it as $5 billion a week, $1 billion a day or $125 million an hour."

Though not necessarily inflationary during a period of extreme economic weakness such as now prevails, the record Government deficits will prove hugely disruptive once the economy begins to recover. That is because the borrowings needed to cover them would tend to "crowd out" private corporations from the nation's credit markets, forcing interest rates to levels that would either choke off growth altogether or else compel the Federal Reserve to expand the money supply so rapidly as to rekindle inflation.

During the recovery from the last serious postwar recession of 1973-75, economic growth eventually gave way, beginning in early 1978, to a rebirth of high inflation. Then the Federal Reserve began to tighten up on credit to cool off the economy and bring inflation to heel. Yet making money scarce automatically makes it more costly, thus pushing interest rates up and sending bond prices skidding.

Having learned from bitter experience what can happen to their investments in a recovering economy, bondholders in recent weeks have grown wary and started cashing in on their spectacular 1982 profits while the economy is still weak. The selling has put further downward pressure on prices, which have slipped by an average of about 5% from their rally peaks. That in turn has helped hold interest high, and made businessmen and investors start to wonder if the cost of money will fall much farther under even the most favorable circumstances.

Yet in spite of the uncertainty, a long list of investment analysts and economists argue that interest rates are bound to keep falling in 1983 no matter what the economy does, making bonds still one of the best buys in all of finance. Not only are rates high, but inflation, for now at least, is in full retreat.

Further evidence of progress in the inflation fight came last week when the U.S. Labor Department reported that consumer prices rose during November by a mere 0.1%. As a result, inflation for all of 1982 now looks likely to remain under 5%, the lowest level in six years. Says David Levine, economic analyst for the investment firm of Sanford C. Bernstein & Co.: "The long-term outlook for bonds is bright indeed. The vast amount of slack in the economy will ensure that inflation will continue to decline even after the economy starts to recover."

Considering the economy's weakness, many experts argue that fears of crowding out in the market are also overblown. Reason: as companies increase their long-term borrowings, they are paring their short-term debt even more, thus easing their overall demand for credit.

What happens to bonds in 1983 will depend crucially on the Federal Reserve. Having stressed repeatedly since 1979 that it was determined to prevent the money supply from expanding out of control, the Fed since midsummer has allowed money to grow at an annual rate that is now approaching 17%, just about three times the bank's own officially announced 1982 target growth rate. Though the Fed has sought to play down the significance of the overshoot, investors are concerned that the growth will eventually prove inflationary, provoking the Fed to tighten up, sending interest rates soaring.

On the other hand, many experts believe that such fears are premature. Says Michael Evans, chief economist of McMahan, Brafman, Morgan and Co., a New York securities firm: "With the economy so weak, I think the Fed is just plain too scared to do anything except keep pushing out money for the foreseeable future. We've seen 15% money growth in the last quarter with no recovery in sight, so they'll probably keep pushing. To put it bluntly, the Fed will continue to buy up the Government's debt."

Ultimately, of course, too much money can wind up being as damaging to an economy as too little. While the Fed walks the razor's edge between economic collapse and runaway inflation, it badly needs the support of both the Congress and the Administration to curb spending, chop the deficit and prevent the nation's current economic troubles, and the bond market's jitters, from turning into something far worse. —*By Christopher Byron. Reported by David Beckwith/Washington and Frederick Ungeheuer/New York*

Put a Cash Cow in Your Portfolio

An investor in municipal bonds, it was long thought, also had to own a winter home in Palm Beach and play polo in his spare time. Only the very rich, the reasoning went, would invest their money at low rates in order to receive tax-free interest. However, as inflation has pushed more and more middle-class Americans into higher tax brackets, there has been a growing curiosity about these complex securities. Bond Salesman James Lebenthal has spent ten years trying to raise the public consciousness about municipal bonds, and has gone about the task in an unorthodox way. Instead of relying on dull technical advertisements in financial publications, Lebenthal appears in his own television commercials, declaring that "bonds are my babies." Such tactics have helped transform his small New York City firm, Lebenthal & Co., into one of the U.S.'s largest municipal bond dealers that sell only to individuals.

James Lebenthal pitching municipal bonds

"Nobody buys municipal bonds out of love for financing the home-town sewer system," says Lebenthal, 54. Instead, in an ever changing series of advertisements that all carry the same message, he drives home the lesson that municipal bonds can pay hefty returns to people who earn $50,000 a year or more. In one memorable commercial earlier this year, for instance, Lebenthal was seen holding paper cows made out of folded bond certificates. "We've been selling a cow that instead of milk gives money," he declares in his precise, didactic tone. "So put a little moola in your portfolio and get yourself a cash cow." The message is getting across. Lebenthal & Co.'s sales have been growing at about 20% a year and reached an estimated $400 million in 1982.

All municipal bonds are exempt from federal taxes. They are especially attractive to residents of the state or city selling them, because then they are usually exempt from state and local taxes as well. For example, a New York City couple with a taxable income of between $45,800 and $60,000 will be in a 51% bracket in 1983 if federal, state and local income taxes are all counted. So a New York State or city bond that pays 10% interest will produce as much money as a taxable investment yielding 20.4%. As Lebenthal points out, however, a bond's value fluctuates with interest rates and economic conditions. He warns that if individuals must sell before maturity when the bond market is in a decline, they could take a loss.

With state and local governments expected to issue record volumes of bonds in 1983, Lebenthal plans to be busier than ever. Though his firm has just 32 sales people, a tiny force compared with giants like Merrill Lynch, he brags: "Pound for pound, we may sell more municipal bonds than any other firm in America."

The Cartel Is Losing Its Clout

OPEC's failure to agree on quotas could bring it down

The showdown at last week's meeting of the Organization of Petroleum Exporting Countries in Vienna was taut and grim. At one of the long rectangular tables sat Sheik Ahmed Zaki Yamani, the elegantly groomed Oil Minister of Saudi Arabia. At another, roughhewn and tieless, was Seyyed Mohammad Gharazi of Iran. The issue before them was the control of OPEC itself. The result: a draw that deepened the most severe crisis in OPEC's 22-year history and raised doubts about whether the organization can ever function as an effective cartel.

The frequently bitter two-day session merely papered over conflicts that have been brewing since 1981, when the global recession helped spawn a worldwide oil glut. The 13 member nations agreed to let OPEC's bench-mark crude-oil price stand at $34 per bbl., its level for more than a year. They also approved a 1983 production limit of 18.5 million bbl. per day. That would be about the same amount that members pumped during 1982, but it would be higher than the 17.5 million-bbl. ceiling that OPEC set for itself last March. Said a U.S. oil-company executive who observed the meeting: "Prices now will probably continue to drift down slowly, just as they had been doing."

More important than the actual agreement was what was left out. The conference did nothing to resolve the crucial question of how much oil each member should produce. That leaves OPEC without a formal method for limiting its output to maintain its price. Such a method is the heart of a true cartel. Notes John Lichtblau, president of the Petroleum Industry Research Foundation: "To agree on an overall production level does not mean that much when you cannot decide how to set this level. The question of who will produce what is really the most important thing."

OPEC never had to worry about setting individual quotas during the palmy 1970s. The group jacked up the price of oil from $1.35 per bbl. in 1970 to $29 per bbl. ten years later. But the rising prices led consumers to make strenuous efforts at conservation and attracted a flood of capital that went into finding and pumping oil. As a result, for the first time, in 1982, non-OPEC countries produced more oil than the OPEC nations.

Also in 1982 the OPEC countries appear to have recorded a deficit in their international current-account balance for the first time since they emerged as a major price-setting force. Consequently, the poorer OPEC nations are under pressure to produce more oil to keep revenues flowing. The cartel first tried to restore order last March by assigning production quotas. That effort was an instant failure: some members overshot their ceilings by 100% or more.

The conflict within the organization now threatens to tear it apart. One faction, led by Saudi Arabia, includes neighboring Persian Gulf producers like the United Arab Emirates, and does not want to lower its production further to let the other side raise its output. The opposing faction, which includes Iran, Nigeria and Indonesia, desperately needs income and is eager to pump every drop of oil that it can sell, even if that sends prices plummeting. Iran, which has become the spokesman for this group, is spurred by the need to finance its two-year-old war of attrition with Iraq. It is now producing some 3.2 million bbl. daily, nearly three times the 1.2 million-bbl. quota set for it in March.

Experts are still reluctant, however, to dismiss OPEC as a price-setting force. Says Lichtblau: "This is not the end of OPEC. It has weakened since the end of 1981, but the price of oil is still substantially above what it would be in a free market right now." Walter Levy, a top oil consultant, believes that adversity could save the organization. Says he: "If the fear of Allah enters OPEC members, maybe they will say that it is better to work out a program among themselves rather than face a free-falling oil price that leads to revenue losses by everyone."

Most of OPEC's muscle comes from Saudi Arabia, which accounts for roughly one-third of the group's output. Although the Saudis are now producing only about three-fourths of their March quota of 7 million bbl., analysts expect Riyadh to maintain that level, rather than pump more, in order to maintain prices. Predicts Henry Schuler of Georgetown University's Center for Strategic and International Studies in Washington: "The Saudis will take up the slack. I think they are compelled to hold prices and accept a reduction of market share."

Yamani of Saudi Arabia, left, and Mani Said al-Oteiba of the United Arab Emirates in Vienna

Conflicts and the global slump threaten to tear the once mighty price-fixing group apart.

That would be welcome news in some quarters. Bankers, for example, now view the prospect of a break in prices with the same horror that they once reserved for ever rising energy costs. A steep price drop could crush an ailing oil exporter like Mexico, which has borrowed billions from international banks and is already in the midst of an economic crisis. Sharply lower prices would also bankrupt some existing high-cost exploration and production ventures.

Informed observers look for OPEC's jury-rigged price and production arrangement to survive the winter, when oil demand will be at a peak. The crunch is likely to come in the spring, when homes and workplaces turn down their thermostats as the heating season ends.

The long-term outlook for OPEC and oil prices is squarely tied to the health of the world economy, which shows few signs of rebounding any time soon. A vigorous recovery, however, could rejuvenate the cartel by driving up demand. Says James McKie, a University of Texas energy expert and member of the TIME Board of Economists: "If world recovery does proceed and the growth of demand resumes, I would expect OPEC to regain at least the amount of clout that it had before the Iranian crisis." OPEC may be gravely wounded, in other words, but rumors of its imminent demise are probably exaggerated. —***By John Greenwald. Reported by Mary Earle/New York and Lawrence Malkin/Vienna***

Foxless Lady

Sherry with a twist

In her three years as the first female president of a major U.S. film studio, 20th Century-Fox Productions Chief Sherry Lansing, 38, has overseen exactly one big box-office hit: *Porky's*, a pickup from an independent film maker. But that commercial success was far outnumbered by such turkeys as *Monsignor*, *Making Love*, *Six Pack* and *Author! Author!* In *The Verdict*, starring Paul Newman, Fox finally has a critically acclaimed smasheroo, but Lansing will not be around to reap the rewards. Last week she resigned her post, which paid $300,000 a year, plus bonuses.

Fox Film Corp. Chairman Alan Hirschfield told TIME that Lansing had not been forced out, yet he did not sound dejected. "She came to me and said she had another opportunity, and she felt it was best for her and best for the company that she take it," said Hirschfield. "We agreed it was the right thing for her and the right thing for us."

Lansing said that for legal reasons she could not talk about the opportunity for at least a month. There was speculation, all of it wrong, that she was headed for a top position in a new studio to be formed by CBS Inc., Time Inc.'s Home Box Office and Coca-Cola's Columbia Pictures. Better guesses had her going to or starting an independent production company, where Tinseltown's big money is now.

Lansing's appointment as the boss of Fox films was regarded as frivolous when it was announced in January 1980, a "figurehead" move, as another female film executive described it at the time. A former math teacher (in the racially tense Watts district of Los Angeles), Max Factor model, actress (with John Wayne in *Rio Lobo*) and $5-an-hr. script reader, Lansing moved to Fox from Columbia, where she had risen quickly to senior vice president of production.

Departing Lansing

At Fox, Lansing learned fast but was reportedly frustrated by insufficient authority to do her job as she saw fit. Said one acquaintance: "It was a very unhappy situation, which is not unusual in this business." She was overruled by superiors, for example, in her attempts to get *Chariots of Fire* distributed by Fox. Instead, it was distributed by Warner Bros. and the Ladd Co., became a box-office smash and won an Oscar as best picture of 1981. With *The Verdict*, a film about an alcoholic Boston lawyer's malpractice case against a Catholic hospital, she guided the project from start to finish and deserves credit for its success. That accomplished, Lansing announced her departure. Said she: "What better time is there to go out than to go out on a hit?" ■

CHRISTOPHER R. HARRIS

Building the new Martco plant in Louisiana

Creating Jobs

States launch enterprise zones

The biggest thing in LeMoyen, La., used to be Baker's Stop and Shop, the general store that serves as a landmark along Route 71 for this impoverished rural community. With unemployment in St. Landry Parish at 15.3%, the job seekers among LeMoyen's few hundred residents have been lucky to find occasional farm work in the nearby soybean and rice fields. Now a huge $25 million plant is rising in an empty meadow across the road from Baker's. When it opens next April, the Martco plant will churn scraps from southern hardwoods into 130 million sq. ft. of building board per year, providing up to 150 jobs. "We've got about 200 names on file already," says Jonathan Martin, who is supervising construction of the plant. "We must get two or three people in here every day asking when we're going to start hiring."

Martco is one of the first firms to qualify for state assistance under the Louisiana Enterprise Zone Act of 1981, a package of tax-relief measures designed to lure investment to depressed rural and urban areas. Martco and the seven other companies approved so far are expected to generate some 1,200 jobs in exchange for $4 million in state tax breaks over the next five years. Says Governor David Treen: "We think the returns far outstrip what we give up in revenues." Indeed, while Congress has been sitting on President Reagan's federal enterprise zone proposal, made last March, a dozen* states are forging ahead with their own versions.

In some cases, notably in Toledo, the state legislation is giving an extra push to experiments that were already successfully under way. City Venture Corp., founded three years ago by Control Data Corp. and other companies in cooperation with the American Lutheran Church and the United Church of Christ, is helping to revive Toledo's rundown Warren-Sherman district, where unemployment is higher than 30%.

The project's centerpiece is an $8 million commercial complex that has acted as a small business incubator for the neighborhood. Companies renting space there were given managerial and technical advice. Area residents, many of whom had never held a full-time job, got free training in the skills they needed and day-care help for working mothers. Additional incentives for new businesses were provided by parking, security and low-cost clerical services for some firms.

As a result, Warren-Sherman is beginning to hum. Twenty companies, doing everything from carpet installation to computer-parts assembly, have set up shop in the district. Some 500 new jobs have been created so far, and 1,500 more are projected by 1987. In October, Ohio designated Warren-Sherman as its first enterprise zone. That promises to reduce state and local taxes for some firms. The next step is a 23-acre industrial park, where Owens-Illinois is now building a plant that will make corrugated boxes.

Some states are creating service jobs by attracting high-tech firms to dilapidated areas. In New Haven, an 80-acre science park is being built near Yale University as part of a larger enterprise zone. A nonprofit, joint effort by Yale, the Olin Corp. and the city, this park offers new companies special access to the university's research and teaching facilities, as well as generous tax abatements. More than a dozen companies have expressed an interest in moving in. Park officials are now busy helping the maintenance, security, restaurant and other support businesses in the zone gear up for their new customers. They expect this district to blossom with up to 300 nonprofessional jobs in the next year, 1,000 by 1988.

In states with no enterprise-zone legislation, some cities are devising their own zones. San Jose, Calif., for instance, has waived taxes and fees that can amount to 4.7% of building costs in order to spur new business and residential construction in a 5-sq.-mi. "central incentive zone" downtown. One result: the Sainte Claire Hilton, product of a $6.5 million renovation, which employs 150 people.

Critics fear that instead of creating new jobs, these zones will simply draw business away from other areas. But in some instances they have attracted companies that could not otherwise have afforded to expand. More important, many workers finding jobs in enterprise zones were formerly dependent on public assistance. Sums up City Venture President George Bardos: "The basic goal is to address unemployment where it is worst." ■

*In addition to Louisiana, they include Connecticut, Florida, Illinois, Kansas, Kentucky, Maryland, Minnesota, Missouri, Ohio, Rhode Island and Virginia.

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*Burke Market Research Survey of 5,000 businesses, April 1980

People

Makarova before her accident in the revival of *On Your Toes*

Charles and Diana trying to coax a smile out of six-month-old William

While dancing in a revival of *On Your Toes* at Washington's Kennedy Center, Ballerina **Natalia Makarova,** 42, heard the crash too late. Two lengthy pipes used as scenery ballast fell to the stage, striking the dancer. Dr. **Max Cohen,** 42, a clinical assistant professor of surgery at George Washington University School of Medicine, who had been sitting front row center, treated her for a fractured shoulder blade and a 3½-in. gash across the scalp. "She is in some ways fortunate to have survived," says Cohen. "It could easily have been more serious." Makarova will probably require two months or more of recuperation before she can dance again.

■

The victor is supposed to leap the net magnanimously, not be dragged over it ignominiously. But after an exhibition volley with **Martina Navratilova,** 26, Duncan, the New Jersey Nets' team mascot, gave her an oaf-handed shake that she would probably like to forget. Navratilova could afford a forgiving smile though: last week she erased any doubts (held by **Chris Evert Lloyd**) about who is the top-ranked player in women's tennis. Winning the Toyota championship in New Jersey, Navratilova defeated Lloyd 4-6, 6-1, 6-2, for the $75,000 purse, season earnings of $1,461,055 and a record for the year of 90 wins in 93 singles matches. "She's No. 1, I concede," said Lloyd. "But not next year."

Alda, Rogers at *M*A*S*H* bash

■

Even the Korean War has to end some time. The special two-hour final episode of *M*A*S*H* marks not only the end of the series' wartime hostilities, played out on a sound stage on the Century City lot, but the end of the eleven-year-old, 250-episode CBS television show. Sometimes preachy and self-righteous, but always funny, the program was that rare TV treat, a situation comedy with situations *and* comedy. At a *M*A*S*H* bash to say goodbye, the show's creators and stars were feted with a black-tie dinner in West Hollywood by CBS and the series' producer, 20th Century-Fox. Among *M*A*S*H* alumni, only **Wayne Rogers,** 49 (a.k.a. Trapper John McIntyre), turned up to share a homecoming hug with **Alan Alda,** 46, characteristically unshaven, but sporting a tux. Demobbing Day on the air for the current *M*A*S*H* regulars is Feb. 28, when, with the war over, the members of the 4077th return home to families and civilian jobs.

■

Every parent quietly notes the occasion, but when **William Arthur Philip Louis,** the future King of England, turned six months old, Mom and Dad invited the press and TV cameras. Inundated during her travels around the country with requests for more baby photos, **Diana, Princess of Wales,** 21, convinced his grandmother, **Queen Elizabeth II,** 56, that in addition to her traditional Christmas TV broadcast, there should be one of Sweet William to satisfy the interest of his future subjects. The young Prince seemingly ignored the waving of small toys, kitchy-cooing noises as well as the snapping of fingers and managed but one distinctly nonregal gurgle. "They never do what you want them to do," said **Prince Charles,** 34, after the proud but resigned papa bounced his son on his knee. "We will probably get all those child specialists saying we handled him wrong."

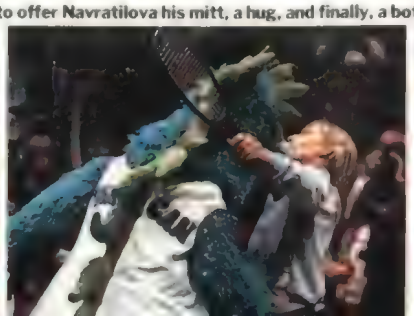
By E. Graydon Carter

On the Record

Vince Dooley, 50, University of Georgia football coach, on how Herschel Walker's winning of the Heisman Trophy might affect his concentration before this week's championship game against Penn State: "Herschel has been wined and dined. Well, I guess 'wined' isn't the right word, because he doesn't drink. He's been Coked and dined. Oops, that sounds even worse. How about if I say he's been Tabbed and dined?"

Lech Walesa, 39, on Solidarity's failure to confront the Polish government more directly: "You can't take on tanks with running shoes."

New Jersey Nets' Mascot Duncan going to the net to offer Navratilova his mitt, a hug, and finally, a bottoms-up handshake



Setting the Record Straight

Washington's old-style kicker, Mark Moseley, lifts the uprights

In Washington, D.C., where many men are famous for putting their foot in it, no one is more renowned at the moment than Washington Redskins Place Kicker Mark Moseley. He has kicked more consecutive field goals than any National Football League kicker before him, and almost all of Moseley's kicks are in the national interest.

Because so much grim business is conducted in this city during the week, Redskin losses on Sunday are ominous events. On Moseley's right leg sways the mood of the Government. Last week, when Moseley broke Garo Yepremian's record of 20 straight field goals, Senators Paul Laxalt and John Warner hurried from the game after the first quarter to vote to keep the Republic going, but were back for the finish. Moseley's third field goal of the day with four seconds left beat the New York Giants, 15-14, and made the record 21. "I had no idea what yard line it was on," said Moseley, an uncomplicated man who leaves mental check lists to golfers. "All I do is swing my leg straight." Even though it was tipped by a Giant, the ball twirled the needed 42 yds.

In the N.F.L. today, soccer-style place kicking is more than the vogue. According to 26 of the 28 teams, it is the superior method. The only two field-goal kickers still swinging their legs straight are Rick Danmeier of the Minnesota Vikings and Moseley. "That's why I was glad to see Moseley get the record," said Lou ("the Toe") Groza, the Cleveland Browns' famed footman, who also played tackle in the '50s. "At least Moseley looks like a football player. I was talking to George Blanda a while back, and he said, 'You know, if they would just tighten the immigration laws, we could still be kicking.' "

German, Mexican, Polish and Norwegian sidewinders proliferated in the pros in the 1960s and '70s until Americans got the knack. In 1966 Cypriot Garo Yepremian's brother wrote to tell him about the land of milk and honey, and the soccer-style pioneer, Hungarian Pete Gogolak. Garo, a humble tiemaker, left home immediately to be a famous tie breaker. "The next thing I knew, I was a Detroit Lion," recalls Yepremian, who would serve four N.F.L. teams. "The first game I ever saw was in Baltimore against the Colts. I kicked off." Before the game, Yepremian's teammates dressed him in his pads. He stands 5 ft. 7 in. "After I kicked the ball, I stood for a moment admiring it. Since I was getting a lot of money, I figured it was part of my job to pick up the tee." He heard the thunder of hoofs. "I ran for my life to the sidelines." Laughter greeted him there. "I couldn't understand it. Then I realized I had run to the wrong sideline. I was sitting with the Baltimore Colts."

RON MODRA—SPORTS ILLUSTRATED

Out of Joe Theismann's hold and Beasley Reece's reach, the record kick

"I can share in the feeling, the atmosphere of the entire game."

Early immigrant kickers had much to fear from all sides. "We were not loved," says Yepremian. In the secret hearts of football players, they were interlopers. "When they kicked a field goal," sneers Alex Karras, Yepremian's old Lion teammate, "they'd jump up and down and yell, 'I kick a touchdown! I kick a touchdown!' " Yepremian says, "I was short, I was bald, and I didn't understand football. But worst of all, I walked off the field cleaner than I walked on."

Back fashioning neckwear after 15 seasons, Yepremian has settled in Miami near his warmest memories. Over nine years there, the Dolphins came to regard him as fondly as a pet and eventually forgave him for the blocked-kick touchdown pass he accidentally threw to the Washington Redskins in the 1973 Super Bowl. "Washington is also where my streak ended at 20," he remembers, "but I didn't really mind Moseley breaking my record. A last-second field goal to win the game, that's doing it in style."

Moseley was a quarterback at Stephen F. Austin State University in Nacogdoches, Texas, and he is accepted by his fellows as a football player. (Occasionally in his twelve-year pro career he has practiced as an emergency quarterback.) "I know that has been an advantage," he says. "I can share in the feeling, the emotion, the atmosphere of the entire game."

Besides being a dreary calling at times, kicking positions are as fragile as Viennese chandeliers. After twelve years and four teams, egg-shaped Austrian Toni Fritsch missed two field goals for New Orleans last week and, disgusted with himself, went home to Vienna. Some of the soccer kickers, domestic and foreign, know enough about both football and human nature to risk tossing their lithe bodies about the field recklessly. If they never get smudged, they are certain to feel more isolated from teammates when the extra points blow off course. The New York Jets' Pat Leahy has had a particularly lonesome time this year. "It's not lonely if you don't let it be lonely," says Moseley, meaning if you never miss any field goals. For neglecting to make eleven of 30 last season, he had to wait until the final cut this year to find out if he was even on the team.

A sturdy leg and strong confidence are Moseley's only equipment. Though the Dallas Cowboys and other interested parties have inquired about the size and mythic qualities of Moseley's right foot, he is not a Sasquatch. His 10½B swaddled in six sweat socks merely appears oversize in a hard, square-toed but lawful boot. The longest N.F.L. field goal on record, 63 yds., was punched by a man with half a foot, New Orleans' Tom Dempsey; Moseley's longest is 54 yds. Asked if he would like a swipe at Dempsey's record, Moseley replies, "I couldn't kick 63 now. Those days are over." Not that he feels older at 34, but the ball feels harder, even through six socks. "On snowy days," he says, "those barefoot kickers," like Philadelphia's Tony Franklin, "make me wince." He made the record on a snowy day in Washington, though no plowing was necessary to bare a spot. In New England, convicts are used for this detail. ("What can they do to me?" said the affable burglar who cleared the way three games ago for a protested 3-0 Patriots victory over Miami. "Put me in jail?") Moseley has almost been good enough to be illegal. —*By Tom Callahan*

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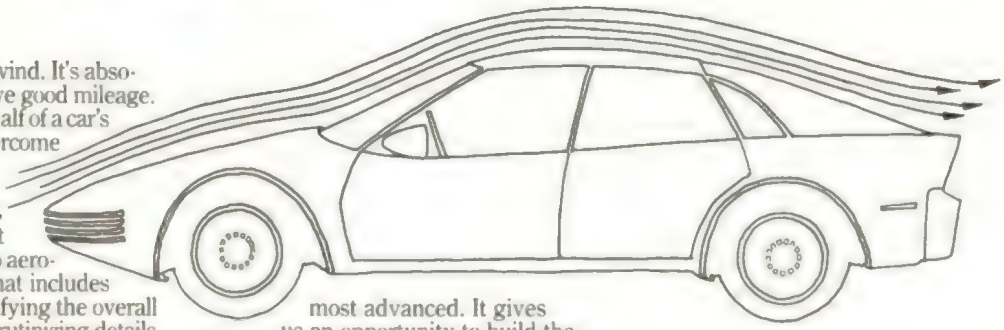

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Show Business

Even a rainy night in the city of light cannot keep crowds away from a hot film

What's at the Paris Bijou?

France has been hit by an epidemic, movie mania

In most of Europe, moviegoers are almost an endangered species. Theaters are closing, and in the past two decades the number of tickets sold has declined by staggering proportions: 88% in Britain, 82% in West Germany and 70% in Italy. But the French, of course, do things differently, and today Gaul seems to be divided into three groups: those inside a movie theater, those in line outside and those looking at the listings, wondering what they should see. In the past two years alone there has been a 41% increase in box-office receipts, and this year's receipts will total more than $600 million. Even President François Mitterrand, according to his Culture Minister, Jack Lang, manages to see at least two films a week.

In Paris, film buffs most weeks have a choice of more than 600 different titles. The highest grossers are often the big American hits like *E.T.*, which sold 690,000 tickets in the first two weeks of its Paris run. The French are probably the most cosmopolitan fans in the world. "We will go see a Portuguese film one week and a Turkish one the next," says Marc Silvera, an official of the Centre National de la Cinématographie. "We are more open to films in other languages than the Americans or the British, and are willing to tolerate subtitles and dubbings. That makes the choice here much more diverse. There is something for everyone."

There are several explanations for France's movie mania. The simplest is the deplorable state of French television, which is vastly inferior to that in neighboring countries. "People are fleeing their homes in search of entertainment," says Daniel Toscan du Plantier, president of Gaumont, the country's biggest film conglomerate. "Everyone knows that our television is the most boring in the world. The Socialist government has programmed intellectual talk shows for Saturday night at 8:30. Even Socialist countries in Eastern Europe wouldn't dream of doing that. There would be riots in the streets."

Another reason is that, unlike Britain or Italy, France has a booming film industry of its own. Sophisticated as they may be, even the French like to see movies made at home, starring actors they can identify with. "You simply can't have a strong filmgoing climate unless you have a healthy domestic film product," says Silvera. "Britain and Italy have learned that to their distress." Though Americans are familiar with titles like *The Last Metro* and *La Cage aux Folles*, most French movies, which lean toward police thrillers, comedies and love stories, never cross the Atlantic, since distributors are convinced that they would not find an audience.

That is something that the Paris moguls would like to change, and they believe that they have found the way to do it. "With cable TV, there's a whole new and very large American market out there for French films," says Toscan du Plantier. "The cable audience wants movies that are made for legitimate theater release and that are made with a quality that can't be found in the usual made-for-TV product. The cable networks need 1,000 movies a year. U.S. studios don't have the talent to satisfy such a vast demand."

To stimulate a mass taste for the Gallic product, Toscan du Plantier's company is planning a February release of one of its biggest hits, *La Boum*, which can be compared to the *Gidget* movies that appealed to American teen-agers in the '60s. Similar films will follow, all dubbed into English, and by the end of 1983, there will be, inevitably, something called *La Boum II*. By 1984, presumably, Toscan du Plantier will know whether he has a *La Boum III* or *Le Bust*. ■

The Longest Phone Call: E.T.'s desperate message to an area code 3 million light-years away, which was followed by millions and led to the year's catchiest phrase, "E.T., phone home."

The Loudest Crash: Francis Coppola's *One from the Heart*, which cost $26 million, grossed $1.2 million, and is the undisputed winner of this year's *Heaven's Gate* award.

The Most Grandiose Astronomical Event: The *Night of 100 Stars*, which brought 204 stars to the stage of Radio City Music Hall in a benefit for the Actors' Fund, and lasted a numbing 5½ hours.

The Longest Wait: For NBC, perennially last in the ratings, to turn itself around under its new board chairman, Grant Tinker, who has sought to succeed with something rarely seen on commercial TV, high-quality programming.

The Most Ubiquitous Actor: Sir John Gielgud, 78, who has appeared in everything from *Gandhi* and *Brideshead Revisited* to commercials for New York City's Inter-Continental Hotel and Paul Masson wines.

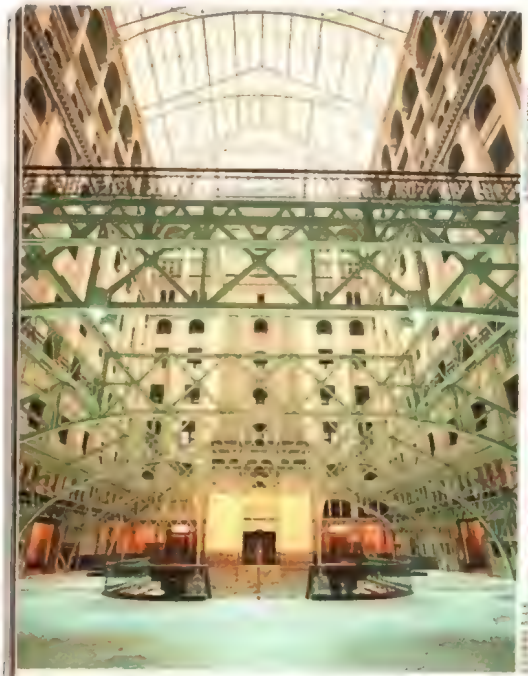
The Reddest Face: That belonging to Ray Stark, who produced, and overproduced, the movie version of *Annie*, which was supposed to be a box-office bonanza but barely covered its $52 million production and marketing costs.

The Hottest Read: David McClintick's *Indecent Exposure*, which told in absorbing detail the sordid story of the David Begelman affair and which all of Hollywood read in Xerox weeks before it appeared in print.

The Most Tragic Waste: The senseless death of John Belushi, 33, from a drug overdose, which silenced one of the best comic talents of his generation.

The Happiest Lady: Raquel Welch, who followed Lauren Bacall as *Woman of the Year* and broke all box-office records at Broadway's Palace Theater.

The Longest-Running Show: The British monarchy, which proved, with the long-awaited birth of Prince William, the break-in at Buckingham Palace and the much publicized escapades of Prince Andrew, that the glitter never fades from that sceptered isle.



Washington's recycled Old Post Office building

Levi Strauss headquarters in San Francisco: corporate pride built on amenity, not height

Design

Fashionable Is Not Enough

The year's finest work is not so much chic as helpful, with flair

The distinction between design and fashion was further blurred in 1982. Design (of buildings, industrial products and graphics) was dominated by fickle fashion. And fashion (of clothing and other non-durables) made free with the word design, relying slavishly on the signature and authority of the fashion designer.

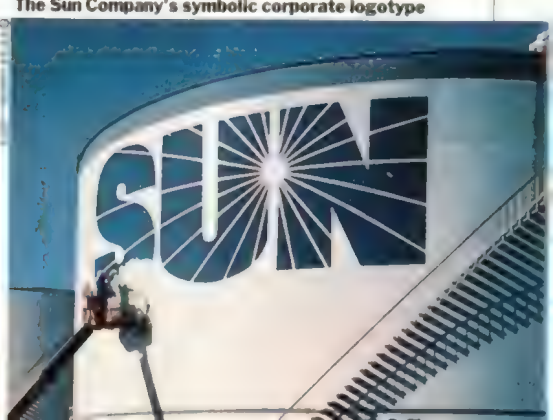
The verbs "to design" and "to fashion" have always been closely related. But when it comes to the nouns, there is a clear distinction, or ought to be. Design is supposed to combine the practical and economical with a dash of artistic flair so that the result is pleasant, perhaps even a joy, both to use and to behold. Fashion does not have to be practical or, heaven knows, economical. Fashion design is all artistic flair. It is all ephemeral. It is all styling. A dress designer is not primarily concerned with the function of clothing. He tries to wrap you in something that is the "real" you. His enemy is not malfunction but boredom.

The functional Helena office chair

Nothing wrong with that, up to a point, and nothing wrong with the hero worship of fashion designers. They are every bit as deserving of celebrity as the celebrities they dress. One begins to wonder only when such fashion kings as Pierre Cardin, Givenchy, Bill Blass and Ralph Lauren bestow the knighthood of their labels on wines, automobiles, chocolates or home fashions. It merely makes these things fashionable, which is not enough. *Caveat emptor.* Enjoy the presumed prestige, but do not confuse high-priced celebrity labels with design.

Design is no luxury. At a time of lagging U.S. productivity, a dangerous imbalance of trade and a deteriorating living environment, good design is nothing less

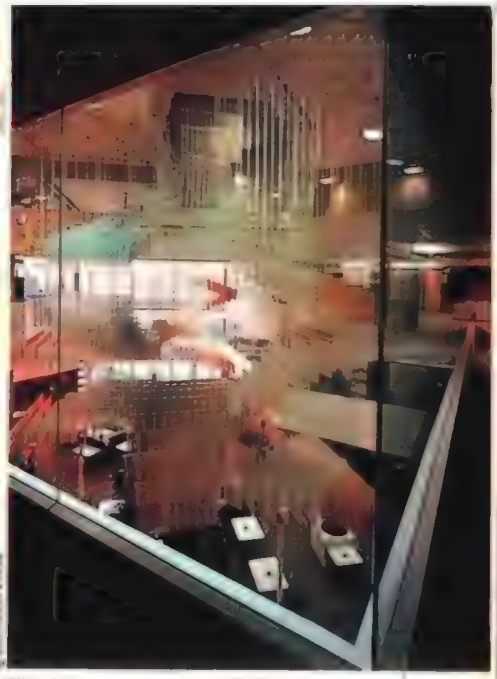
Williwear showroom in Manhattan: an effective gray background for vivid displays



The Sun Company's symbolic corporate logotype

Farmworkers housing in Saticoy, Calif.

Designer Egen with his Evac emergency chair



Fiber banners at Cincinnati Bell headquarters

The BEST OF 1982

than a matter of survival. The tendency in 1982 to acclaim buildings, not because they solved urgent urban problems but because they carried the signature of currently fashionable design celebrities like Michael Graves or Charles Moore, was a trend in the wrong direction.

The year's best designs are designs that are not necessarily chic. They are helpful.

▸ Old Post Office, Washington, D.C. Snatched from the bulldozers, this imposing, romanesque pile of granite on Pennsylvania Avenue has been recycled by Arthur Cotton Moore Associates, architects, to house a festive market for tourists and offices for the National Endowments for the Arts and the Humanities and others.

▸ Levi's Plaza, Levi Strauss & Co., corporate headquarters, San Francisco, Calif. Hellmuth, Obata & Kassabaum Inc., architects. Located on the fringe of the city, this office complex frames a pleasant garden and proves that corporate prestige does not depend on scraping the sky.

▸ Cabrillo Village Farmworkers Cooperative Housing, Saticoy, Calif. John V. Mutlow of the Mutlow Dimster Partnership, architect. Subsidized by the Farmers Home Administration, this adobe-style project was designed for low cost, conservation of energy and family privacy.

▸ Evac Chair. Egen Polymatic Corporation, manufacturer. David Egen, designer. A lightweight, easily stored wheelchair to help elderly or handicapped persons down high-rise fire-exit stairs in case of emergency. A 250-lb. invalid can easily be evacuated by one assistant.

▸ "Grand Exchange," fiber banners for an office atrium of the Cincinnati Bell Inc. headquarters, Cincinnati. Gerhardt Knodel, designer. The ancient art of weaving is used here, in Knodel's words, "to color the air" of an interior court.

▸ Helena Chair. Sunar, manufacturer. Niels Diffrient, designer. A chair not "to enhance architectural space," as some designers would have it, but to sit and work on, and a beauty to boot.

▸ Williwear showroom, New York City. A rough and tough cityscape has been wittily re-created by the SITE design firm in an industrial building in Manhattan's garment district. Painted a uniform pale gray, the room shows women's and men's fashions to their most colorful advantage.

▸ Sun Company logotype. Anspach Grossman Portugal, designers. A radiant new image for a nearly century-old corporation.

▸ Eureka Mighty Mite vacuum cleaner. Eureka Co., Bloomington, Ill., manufacturers and designers. A powerful canister vacuum cleaner light enough to carry on a shoulder strap.

▸ Meredith Corp., Des Moines. Architects Charles Herbert and Associates transformed a hodgepodge of old additions into a modern office complex by wrapping them in glass and piercing them with light courts. —*By Wolf Von Eckardt*

The easily portable but powerful Eureka vacuum cleaner

Des Moines' Meredith Corp.: a modern complex out of a hodgepodge

Hand Grenade

EXTREMITIES
by William Mastrosimone

This is a sting ray of a play. It lashes the audience with melodramatic fury. Its subject is rape, and rape is a four-letter word that screams.

Among crimes against the person, rape is a close second to murder, for it violates the body and desecrates the spirit at the same time. Despite its manifest ugliness, it makes a powerful subject for a play, since any bruising or brutal confrontation between two or more human beings is the atavistic fuel of drama. Indeed, plays with rape as a central motif recur in theatrical literature. Perhaps the most notable is Shakespeare's *Titus Andronicus*, in which the heroine-victim, Lavinia, has her tongue cut out and her hands cut off. She secures her revenge when she reveals her rapists' identities by scratching their names in sand.

Rape, like drama, is an eruptive act; it may detonate in slumberous surroundings. In *Extremities*, the curtain rises on a drowsy afternoon in a farmhouse somewhere between Trenton and Princeton, N.J. Marjorie (Susan Sarandon) is lollygagging about the living room in a bathrobe. Her two roommates are away at work and she is watering plants and feuding with insects.

Suddenly, a nongentlemanly caller opens the screen door and asks, as a ruse, for a guy named Joe who supposedly lives there. Raul (James Russo) is one of nature's punks. He exudes malignant animal magnetism. As the world is his jungle, women are his chosen prey. Marjorie tries a feeble ploy about a policeman husband asleep upstairs, but Raul knows better. He rips the phone cord out of the wall and pins Marjorie to the floor as he semi-suffocates her with a pillow.

Susan Sarandon portrays the rapist's prey
A shift to avenging angel or paranoid witch

In a scene of electrifying revulsion, Raul coaches Marjorie on how to beg for his sexual assault: "Touch my hair. My mouth. My neck . . . Now touch me down there and say you wanna make love!" In a desperate last-minute lunge, Marjorie grabs hold of a roach-killer can and sprays the chemical directly into Raul's eyes.

In the next act, the emotional balance shifts completely. Marjorie may be viewed either as an avenging angel or a paranoid witch. She has trussed up Raul in the fireplace and pinned a white blindfold around his head. She has clamped the head of a brass bedstead in front so that the fireplace resembles a prisoner's cell or an animal's cage. She pokes Raul in the stomach and groin with a broomstick, pours ammonia on him pretending it is gasoline, and peppers him with matches, threatening to burn him to death.

Marjorie's two roommates come home to this bizarre scene. Terry (Ellen Barkin), having once been raped, has no stomach for reliving it. Patricia (Deborah Hedwall) is a card-carrying pop psychologist who wants to relock the Pandora's box of irrationality. She is given to such phrases as "Define your terms" and "I can relate to that."

Marjorie, convinced that the law, as it often has done to women in her situation, will smear her as a seductress and absolve her assailant, wants to bury Raul alive in the garden. That does not happen.

Mastrosimone fudges on the answers to some of the questions he raises. If you trap a rapist who planned to violate and kill you, is eye-for-an-eye justice immutable or does the common bond of humanity invoke mercy? First to last, *Extremities* holds the playgoer transfixed. Robert Allan Ackerman directs all the scenes like hand grenades with the pins pulled, and James Russo and Susan Sarandon, in particular, lob them with precision.

—By T.E. Kalem

Cats. Some adore it. Some deplore it. The lyrics of T.S. Eliot, the music of Andrew Lloyd Webber and the spectacular stage effects of Director Trevor Nunn and Designer-Costumer John Napier have made *Cats* a conversation piece and a flaming megahit.

The Dining Room. Clear-eyed, touching and buoyantly funny, A.R. Gurney Jr.'s drama compassionately graphs the decline of the Wasp, a breed apart.

Extremities. William Mastrosimone's menacing melodrama about rape brought a low-voltage year to a high-voltage end *(see above)*.

Foxfire. Those who hew to goodness and revere the customs of their forebears are rarely met with on a New York stage. Here they are in this tale of Appalachian tenacity, fashioned by Susan Cooper and Hume Cronyn. And who better to memorialize their griefs and joys than Cronyn and Jessica Tandy?

Good. How does a liberal-minded German classics professor become Eichmann's right-hand man at Auschwitz? In C.P. Taylor's play, the gifted Alan Howard makes the insidious slope to hell plausible and harrowing.

"Master Harold" . . . and the Boys. To each of his dramas, South Africa's Athol Fugard brings a tormented conscience, a touch of the poet and scalding honesty.

Monday After the Miracle. This is a tale of fiercely kindled passions and the bittersweet bondage of entwined destinies. It takes up the saga of Helen Keller, Annie Sullivan and John Macy, the man Annie wed, some 20 years after the events in Playwright William Gibson's earlier *The Miracle Worker*. Karen Allen, Jane Alexander and William Converse-Roberts irradiate their roles.

Plenty. With envenomed wit and mocking disillusionment, modern British playwrights have sung an elegy in the graveyard of lost Empire. David Hare has added a tantalizing ingredient: an infernally mysterious woman whose moods and manners displace each other as if she were trying on hats. Kate Nelligan brings her to effulgent life.

A Soldier's Play. Charles Fuller's drama of tensile strength about a World War II black outfit stationed in Louisiana that gets involved in a racial whodunit. The central character, brilliantly portrayed by Adolph Caesar, is a black Regular Army noncom who is as tough as bully beef.

Torch Song Trilogy. Son of a Brooklyn handkerchief maker, Playwright Harvey Fierstein began working as a drag queen in East Village clubs at 16. As he enacts the key role, he vividly evokes a mode of life that is alternately hilarious and heart-wrenching.

Greetings and peace to the people of the United States from the people of Saudi Arabia.

Peace be upon you and your families and loved ones at this time of your great religious feast We greet you in the spirit of peace and friendship At this sacred time it is fitting that we recall our common religious heritage. Ours is the eternal message of a most merciful and compassionate God

This message draws us all closer together It reminds us of the mutual interdependence of the Family of Man. And nowhere is the love of God so evidenced as in the children with which He has blessed us. In hope and faith, they look to us to protect them and guard them from harm

In this season, the people of Saudi Arabia join in prayer and friendship the people of the United States. Let us overcome the problems that threaten to divide us. Let us find the way together to bring peace and well being to the orphaned, the homeless, and the victims of war

People of faith must take constructive steps together to ensure this legacy of peace with justice for all children. We must take our steps thoughtfully and we must do it now.

In the spirit of friendship, the people of Saudi Arabia ask the people of the United States to join with them to work for peace in the name of our future generations. It is our children who will inherit what we have done here...or what we have neglected to do

25. And (know that) God invites
(Man) unto the Abode of Peace
And guides him that wills
(to be guided) unto a straight way.

26. For those who persevere in
Doing good there is the ultimate good in store
And more (than that) no darkness
Nor shame shall cloud their faces
(on Resurrection Day).
It is they who are destined for Paradise
Therein to abide.

Sura Yunus (25-26)

٢٥ وَاللَّهُ يَدْعُوٓا۟ إِلَىٰ دَارِ ٱلسَّلَٰمِ وَيَهْدِى
مَن يَشَآءُ إِلَىٰ صِرَٰطٍ مُّسْتَقِيمٍ

٢٦ لِّلَّذِينَ أَحْسَنُوا۟ ٱلْحُسْنَىٰ وَزِيَادَةٌ
وَلَا يَرْهَقُ وُجُوهَهُمْ قَتَرٌ وَلَا ذِلَّةٌ
أُو۟لَٰٓئِكَ أَصْحَٰبُ ٱلْجَنَّةِ هُمْ فِيهَا خَٰلِدُونَ

سورة يونس (٢٥-٢٦)

The Ministry of Information The Kingdom of Saudi Arabia

Dream Girls

A rock myth 20 years after

Bandstand memories. A trio or quartet of young women in identical dresses, heavy on the sequins and feathers, sway in gentle syncopation as they mouth the words to their new hit record. They have the rough, "found" beauty of stenos or inner-city cheerleaders, and they run through their number with artless urgency, as if they realize that this is their one fluky shot at stardom. They sing of the idealized male, who needs both adoration and protection: the angel baby, the rebel, the leader of the pack, the playboy, the soldier boy, the fine fine boy, the boy I'm gonna marry—he's sure the boy I love.

Boys and girls of the early 1960s returned the favor. By plugging into the nervous system of every love-starved teenager, these "girl groups" dominated the AM airwaves for three or four years and made honest, infectious, good music besides. Wrote Critic Greil Marcus: "If you were looking for rock 'n' roll between Elvis and the Beatles, girl groups gave you the genuine article." The Payola Years of rock have recently been limned in such movies as *Sparkle* and *The Idolmaker* and in the hit musicals *Dreamgirls* and *Little Shop of Horrors*. Now Alan Betrock's *Girl Groups: The Story of a Sound* (Delilah Books) recaptures some of that music's innocent power—and documents the casual exploitation of these young singers by their managers and record producers.

ALAN BETROCK ARCHIVES

Motown's Supremes in the early '60s

Sequins, feathers and artless urgency.

In the free-for-all pop music business of the late '50s, a strained symbiosis obtained between singers and songwriters. Both were young and ambitious; both pulled the music directly from their own up-tempo urban experience. But the writer-producers were white, most of them, and in control; the performers were working-class girls, black or white, and in thrall. With six Top Ten singles (including *Will You Love Me Tomorrow* and *Soldier Boy*), the Shirelles expected that the "trust fund" of their earnings would be substantial but, as they told Betrock, when they turned 21 they learned that the money was not there. Some groups, like the Crystals with *He's a Rebel*, would find their name on a song they had not recorded. Many would be shuffled or discarded when their producers found more malleable girls with the same sound. Even at Motown, where the bosses were black, a team of dream girls like the Supremes could be treated as if they were balky students at a finishing school. Few got rich; most soon returned to gray oblivion.

What is left, and still has its slick power, is the music. Songwriting teams like Gerry Goffin and Carole King, Jeff Barry and Ellie Greenwich, and Barry Mann and Cynthia Weil composed terrific teen anthems for the girl groups. Producers Phil Spector, Shadow Morton and Holland-Dozier-Holland encased the adenoidal voices in a cushion of strings, saxophones and heartbeat percussion. In those years before rock became Ph.D. fodder, the girl-group sound married musical sophistication and the saving emotional jolt. That sound retains its power and appeal. On record, at least, the dream girls are still beautiful.

—*By Richard Corliss*

CLASSICAL

Bach Goldberg Variations (CBS Masterworks). Eloquent, insightful playing from the late pianist Glenn Gould.

Bruckner: Symphony No. 8 (Philips, 2 LPs). Bernard Haitink leads Amsterdam's Concertgebouw Orchestra in a serene, glowing performance.

Elliott Carter: The Early Music (CRI). The cerebral composer has his roots in the folksy American idiom of Ives and Copland, as this disc surprisingly shows.

Elgar: Violin Concerto (Deutsche Grammophon). Itzhak Perlman triumphs in Elgar's most restrained major work.

Handel: Water Music (Erato). This buoyant, vital performance on original instruments by John Eliot Gardiner and the English Baroque Soloists is simply the best available.

Mahler: Symphony No. 7 (RCA, 2 LPs). The *Song of the Night* defeats most conductors. James Levine and the Chicago Symphony crack its secrets with a powerful performance.

Mozart: Le Nozze di Figaro (London, 4 LPs). Matchless Mozartean Sir Georg Solti leads the London Philharmonic and a cast including Kiri Te Kanawa in a sparkling reading.

Reich: Tehillim (ECM/Warner Bros.). In the year of minimalism, Steve Reich's hypnotic psalms are a modern ode to joy.

Vivaldi: The Four Seasons (Archiv). Forget the 45 other versions in the catalogue. Violinist Simon Standage's dashing performance, with Trevor Pinnock leading the English Concert, is the one to have when you're having only one.

Alexander Zemlinsky: Lyric Symphony (Deutsche Grammophon). Lorin Maazel leads a vivid performance of this lush, intense late romantic song cycle.

ROCK

Ry Cooder: The Border (Backstreet/MCA). Texas blues and a theme song straight from the heart: the sound track from the hard-boiled movie.

Greg Copeland: Revenge Will Come (Geffen). A rough mix of lilting melodies with wracking romanticism and Christian mysticism.

Elvis Costello and the Attractions: Imperial Bedroom (Columbia). A funny valentine from a man who is still delighted to be one of rock's most idiosyncratic talents.

Billy Joel: The Nylon Curtain (Columbia). Joel's longest reach and his strongest shot yet.

David Johansen: Live It Up. (Blue Sky/CBS). He was supposed to be too wild to be wrestled onto record. But they finally pinned him, live. A dance-'till-dawn classic.

Little Steven and the Disciples of Soul: Men Without Women (EMI America). Anthems for back alleys and high spirits by the most exciting new band since the Clash.

Paul McCartney: Tug Of War (Columbia). He is still rock's supreme balladeer, and *Here Today* is the simplest and best memorial to John Lennon anyone has written.

Lou Reed: The Blue Mask (RCA). An exorcist whose major struggle is with his own ghosts, Reed still keeps a few paces ahead with a rearing cycle of autobiographical songs.

Bruce Springsteen: Nebraska (Columbia). Just guitar, harmonica and ten songs: a nightmare geography of America.

Richard and Linda Thompson: Shoot Out the Lights (Hannibal). Stifled emotion, broken marriages, betrayal: a series of linked love songs on the year's most pitiless, passionate disc.

A Song to Remember

Arthur Rubinstein: 1887-1982

He was born to play the piano. His huge hands with their wide palms and spatulate fingertips could reach an extraordinary twelve-note span on the keyboard. His vast memory allowed him to store hundreds of pieces of music in his head, ready for performance on a moment's brush-up. His quick mind enabled him to learn a new work simply by studying the score on the train or plane on the way to his next concert, where he would play it perfectly. Most important of all, he had the soul of an artist. When Arthur Rubinstein died last week after nearly 96 years of productive, eventful living, the world lost one of the greatest pianists of the century.

Discussing younger performers, Rubinstein once said: "You know, they are fabulous. They play better than I do. They do things I wouldn't begin to attempt. But when they come onstage, they might as well be soda jerks." Even among the surviving major pianists of his own generation, however, he was unsurpassed. Vladimir Horowitz, 78, may have a flashier, more dazzling technique; Rudolf Serkin, 79, may have a more intense emotional identification with the German classics; Claudio Arrau, 79, may have an even wider repertoire. But Rubinstein had everything: in his playing, consummate virtuosity and a pellucid tone were at the service of a natural musical storyteller.

His appeal was phenomenal. The largest-selling classical pianist in history, he made more than 200 records, which sold 10 million copies. Although Rubinstein was a modern pianist in such things as fidelity to the score and a desire that his playing call attention only to the music, never to itself, he was also a direct link to the pianistic tradition of the 19th century; when audiences heard Rubinstein perform, they were listening to a man born six months after Liszt died. No wonder Violinist Isaac Stern last week called Rubinstein "part of the centrality of music in our time."

He was born in the industrial city of Lodz, Poland, on Jan. 28, 1887. His father, who owned a small textile factory, quickly recognized his son's talent. At four, Rubinstein had calling cards that read ARTUR THE GREAT PIANO VIRTUOSO; at eight, he was studying in Berlin. In 1906 Rubinstein made his first trip to America. The notices were mixed; some praised his spirit, but others carped about his technical waywardness, a criticism that haunted him for nearly 30 years. Disheartened, Rubinstein returned to Europe, where he lived the uncertain, itinerant life of an aspiring performer, moving from hotel to hotel, from country to country, dining on lobster and caviar one week and on a sausage and dry roll the next.

Along the way, he seems to have met everyone. He knew Stravinsky, he knew Picasso. He knew Joseph Conrad and Gertrude Stein. He knew fine wine, he knew fine art. Most of all, it seems, he knew women; his two-volume autobiography is almost as much a recounting of amorous conquests as musical triumphs. "It is said of me," he once told an interviewer, "that when I was young I divided my time impartially among wine, women and song. I deny this categorically. Ninety percent of my interests were women."

RCA RECORDS

The master in his element: under his hands, the piano sang

"No man has lived his life more fully than I have."

His career as an international playboy was curbed in 1932 when he married Aniela Mlynarski, by whom he had four children. But it was not entirely ended: forsaking Nela, Rubinstein lived the last two years of his life in Geneva with his fortyish English secretary, Annabelle Whitestone.

Marriage settled Rubinstein in more ways than one. Up to then, he had got by on sheer talent. But after the birth of his first child in 1933, he took up the piano in earnest; for three months, he practiced diligently at a remote mountain cottage in southeastern France. "I didn't want people telling my child after I died, 'What a pianist your father might have been,' " he explained. He emerged from his battle a master of the keyboard; at age 47, his real career was about to begin.

The former prodigy became even more prodigious. At 69, he played a marathon cycle in New York City that consisted of 17 compositions for piano and orchestra, on five programs, within two weeks; in 1961 he gave ten Carnegie Hall concerts in one season. Conductor Edouard van Remoortel was probably not exaggerating when he said that Rubinstein was "the only pianist you could wake up at midnight and ask to play any of 38 major piano concertos." Before blindness put an end to his public career in 1976, he was playing up to 100 concerts a year.

To see Rubinstein onstage was to witness a master in his element. Striding purposefully to the keyboard while acknowledging the welcoming cheers, he would sit down, adjust the tails of his formal coat, tilt his face upward at about a 45° angle and stare intently into the middle distance as he composed himself. Then the great hands would rise from his sides and come down on the keyboard. The piano, with its intricate mechanism of strings and hammers, would cease to be a percussion instrument when Rubinstein caressed it; in his hands, it sang.

"At every concert," Rubinstein once said, "I leave a lot to the moment. I want to risk. I want to dare. It's like making love. The act is always the same, but each time it's different." But some things were consistent. His Chopin—and he was peerless in Chopin—was strong-willed and large-boned, robust and masculine, yet sensitive and poetic. His Brahms was as hearty, bluff and ruminative as the composer himself. Rubinstein played Spanish music with the brio of a native (Spain was one of his favorite countries), and Impressionist music like a born Frenchman. Perhaps that was to be expected from a man who seemed at home everywhere and who spoke eight languages. Rubinstein was a champion of modern music in his younger days; two of the most difficult works in the repertoire, Stravinsky's piano arrangement of his own *Petrushka* and Villa-Lobos' *Rudepoema* are dedicated to him.

One wintry day in 1908, Rubinstein was alone, broke and hungry in a Berlin hotel room, his career stalled, unable to pay the rent, a love affair in tatters. He took the belt from an old robe, fastened it to a hook on the wall and put a loop around his neck. As Rubinstein pushed a chair from beneath his feet, the worn belt ripped apart and he landed in a heap on the floor. It was then, he later said, that he learned the secret of happiness: "Love life for better or for worse, without conditions."

Those were words he lived by to the end. His motto, in Polish, was *"Nie dam sie"* (I shall never give in), and he never did. "Music is not a hobby, not even a passion with me," he once said. "Music is me. I think I can say no man has lived his life more fully than I have. My life is made. If I die today, still, I've had it. Nobody can say I've been deprived of anything." Of some men it is said that they lived for their art; Rubinstein's life *was* his art, and music was its expression. —*By Michael Walsh*

Cinema

Jen and Kira, the last Gelflings, relax between heroic jousts against the evil Skeksis

Magical, Mystical Muppet Tour

THE DARK CRYSTAL *Directed by Jim Henson and Frank Oz*
Screenplay by David Odell

No Kermit. No Bert and Ernie. Sam the Nixonian eagle and Grover, with his perpetually pubescent voice, are elsewhere. This movie is serious: Jim Henson's foray into the art, dammit, of puppetry. With the help of *Star Wars* Producer Gary Kurtz, *Faeries* Artist Brian Froud, fellow Muppeteer Frank Oz and $26 million, Henson has devised a luxuriantly original fantasy world as dark as the magic crystal totem at its center. The setting is "another world, another time, in the Age of Wonder." A war between the benevolent Mystics (who look like shaggy-dog anteaters) and the evil Skeksis (pustular vultures) has obliterated all but a few of each. Under the Skeksis' whimsically sadistic reign, virtually every member of the industrious elfin race of Gelflings has been slaughtered. Only two remain—Jen, a young male, and the girl Kira—to replace the crystal's missing shard and set the world aright again.

It takes no sorcerer's power to realize that this other land is one small leap of the imagination from J.R.R. Tolkien's Middle-earth, and that Jen's adventures will frequently echo the Hobbit Frodo Baggins' in *The Lord of the Rings*. As narrative, the incidents in *The Dark Crystal* are unremarkable; as the excuse for special effects, fanciful décor and eccentric characters, they do nicely enough. Here, as in such ambitious films as *Blade Runner* and *Diva*, texture is more important than text. The slow funeral procession of Mystics across an undulating desert; the Skeksis' cruddy doge's palace, in which these hilariously sloppy eaters dine on live Podlings and scheme for ascendancy; Jen's dream sequence, briefly sparkling with hope and memory—all are set pieces that justify the expense and the viewer's attention.

The invention is impressive, but there is little indication of the Henson-Oz trademark: a sense of giddy fun. Audiences nourished on the sophisticated child's play of the *Sesame Street* Muppets and the music-hall camaraderie of *The Muppet Show* may not be ready to relinquish pleasure for awe as they enter *The Dark Crystal's* palatial cavern. And they may not be alone. Miss Piggy would take one look at the place and order pink satin drapes.

—*By Richard Corliss*

Bob le Flambeur. Trench coats, neon lights, rain-washed streets. And a man of honor in a world of thieves. French Writer-Director Jean-Pierre Melville's drama of a gambler down on his luck took 27 years to arrive in the U.S.; it is a classic example of the dark, doom-dripping genre known as *film noir*.

Diner. The not quite coming of age of five guys in Baltimore back in the 1950s. Nothing much happens—except the dawning realization that, in these lives, nothing much will ever happen. Writer-Director Barry Levinson found saving good humor in this landscape of deferred dreams and encouraged Oscar-worthy performances from Mickey Rourke, Kevin Bacon and Daniel Stern.

E.T. The Extra-Terrestrial. The most successful movie ever is also the best film of the year—an effortless display of cinematic ingenuity that buoys the spirit. Bravos to Steven Spielberg, Screenwriter Melissa Mathison and a remarkably mature young actor, Henry Thomas, as E.T.'s best friend. Peter Pan is alive and well and commuting to Southern California.

Gandhi. Richard Attenborough's 3-hr. 20-min. film is a historical epic on the grand scale, but one that touches the heart with its moral earnestness and the marvelous humanity of Ben Kingsley's performance in the title role.

Mephisto. An actor in search of a role sells his soul to the Nazis in order to obtain it. In István Szabó's unbalancing and brilliant study of a theatrical mind at the end of its tether, Klaus Maria Brandauer gives a great performance as a man too innocent about his own ambition.

Moonlighting. Four Polish laborers spend an edgy month in London—December 1981, when Poland fell under martial law. Writer-Director Jerzy Skolimowski has devised a bitterly funny metaphor for the dilemma of the liberal tyrant. As the foreman, isolated from his workers and his own best instincts, Jeremy Irons is quietly spectacular.

My Favorite Year. A has-been movie star, played with flopsy charm by Peter O'Toole, redeems his career and character by doing a guest shot on a '50s TV variety show. It's a great comic turn, and the film, written by Norman Steinberg and Dennis Palumbo and directed by Richard Benjamin, is the year's sweetest trip down memory lane.

Poltergeist. The hell-mouth side of Spielberg's suburban diptych: vengeful spirits drive a middle-class family beyond bananas. The film delivers honest special-effects shocks without forfeiting its good nature. Under Tobe Hooper's direction Jobeth Williams and Craig T. Nelson shine as the dogged mom and the heroic-in-spite-of-himself dad.

The Road Warrior. An apocalypse for the car culture: the good guys have the gasoline, the bad guys own the autos. The violence is glancing, but stings; the vision is dark and hot-rod fast. Australian Director George Miller's socko comic strip is also a textbook of sophisticated film making.

Tootsie. A screwball comedy for our times, with Dustin Hoffman splendid as an actor who dons a dress to win a role and becomes a better man as a result. The supporting cast is extraordinary, the writing and direction on pitch.

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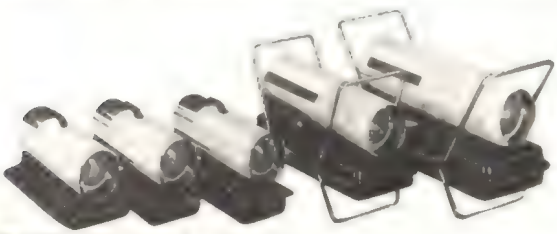

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Cinema

Ghoul's Delight

SIX WEEKS
Directed by Tony Bill
Screenplay by David Seltzer

Before we go on, a swig of Maalox is indicated. Designed to touch the heart, *Six Weeks* is a ghoul's delight that collides with the stomach instead.

Ready? A California state assemblyman (Dudley Moore) is running for Congress. On his way to a fund raiser, he becomes lost and is given directions by a waif on the road, one of those annoyingly precocious children beloved by bad scriptwriters. He invites the girl (Katherine Healy) to the party, and it turns out that she is not a waif at all but the daughter of America's cosmetics queen (Mary Tyler Moore). The mother makes him an offer. If he gives her twelve-year-old, who has developed a crush on him, a meaningful role in his campaign, she will make a big contribution. He is soon persuaded: the girl is dying of leukemia and has only a few—guess how many—weeks to live.

The Moores and Healy celebrate in New York
Holiday spirits with a swig of Maalox.

From this low, the incredible script sinks to lower and lowest. What the girl really wants is for someone to comfort Mama when she is gone. Although the candidate is happily married with a son of his own, he becomes a surrogate father and husband for the remainder of the dying girl's days. He accompanies mother and daughter on a Christmas holiday outing to New York, takes them for a carriage ride through a snowy Central Park and even manages to get the girl a role in the New York City Ballet's annual production of *The Nutcracker*.

In one of the most tasteless scenes of the film, she unites the two adults in mock marriage. "We agree to be married for now because there is now always," she intones. "We will remember this pledge until we can no longer remember." Such lines are hard to forget, however, and although the performances are as credible as the script allows, the only moral of this crass and manipulative movie seems to be that even two Moores can add up to very little.

—*By Gerald Clarke*

SURVIVAL

Nuclear War.
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TIME

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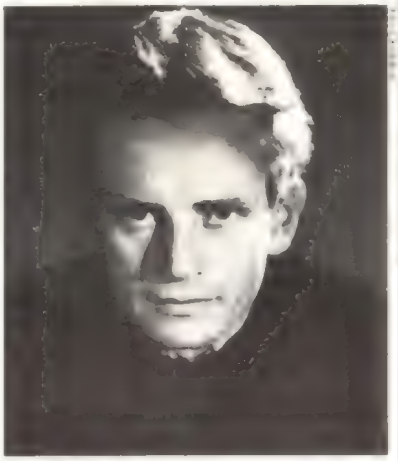
Identical Twins, Uncommon Men

ON THE BLACK HILL *by Bruce Chatwin; Viking; 249 pages; $14.75*

With his first two books, English Author Bruce Chatwin revealed a flair for the exotic and unexpected. *In Patagonia* (1978) conducted a guided tour through a remote, forlorn region of South America. *The Viceroy of Ouidah* (1980) took an imaginative leap in time and space back to the flourishing days of the West African slave trade. Given these performances and the critical praise they received, Chatwin's third book (and second novel) seems more surprising still. *On the Black Hill* has nothing at all to do with wanderlust or faraway places; it is as firmly rooted to one spot as the geological formation in its title.

Lewis and Benjamin Jones are identical twins born in a farmhouse just on the border of England and Wales. The year of their coming is 1900. They are children of this century; yet their childhood could easily have transpired 300 years earlier. They measure their growth against the ageless progress of the seasons. Their father, a bad-tempered Welshman, rents a farm of 120 acres from the local squire. He expects his sons to pitch in when they are big enough. Their mother, a missionary's daughter, wants them to go to school and better themselves.

The twins, for their part, are passive spectators at this struggle for their futures. They have discovered an uncanny self-sufficiency with each other. When a wasp stings one, the other feels pain and weeps. They infuriate their father by conversing in a private language. Lewis explains: "It's the language of the angels. We were born with it." Their adoring mother tries to discourage their odd sense of joint identity: "She bought them Sunday suits—gray tweed for Lewis and blue serge for Benjamin. They wore them for half an hour, then sneaked off and came back wearing each other's jacket. They persisted in sharing everything. They even split their sandwiches in two, and swapped the halves."



Bruce Chatwin

Making ordinary lives extraordinary.

Chatwin interrupts this sibling harmony with England's entry into World War I. The farm is not big enough to warrant service exemptions for both of them. Their father explains to the local authorities "how his sons were not two persons, but one," to no avail. Benjamin is inducted and hauled off to the nearest barracks: "A month later, certain warning signals told Lewis that the army had given up trying to train his brother, and was using force." Benjamin's "dishonorable discharge" spares the twins from physical injuries, but the word that both are slackers and shirkers informs the neighborhood against them. Neither can wander far from home without encountering taunts and jeers. By the time the war is over, "the twins' world had contracted to a few square miles."

And there it remains for the next 60 years and the last half of the novel. A narrative letdown, of sorts, might be expected at about this point in the story. Lewis and Benjamin seclude themselves specifically so that nothing unexpected or notable will happen to them. Yet their author shows how extraordinary such ordinary lives can seem. For one thing, the twins are at ease in a landscape of striking beauty and variety. Each year spring renews the earth around them: "Shreds of cloud hung motionless in the sky. The hills were silvery in the sunlight, the hedges white with hawthorn, and the buttercups spread a film of gold over the fields. The paddock was thick with bleating sheep." As old men, Lewis and Benjamin follow the trails of their childhood. "Along the horizon, the hills were layered in lines of hazy blue; and they reflected how little had changed since they walked this way with their grandfather, over 70 years ago."

The twins change no more than their surroundings. They remain steadfastly childlike. After their parents' death, both sleep in their double bed, platonically, utterly innocent of Freud or of any sense of guilt or impropriety. Their naiveté is secured through solitude. News of the outside world comes, if at all, as a whisper. The local paper headlines the huge salmon caught, after a three-hour struggle, in a

FICTION

Aunt Julia and the Scriptwriter by Mario Vargas Llosa. One of Latin America's leading writers transforms the vagaries of his youth into a daring, multilayered novel about love and art in Lima, Peru.

Bech Is Back by John Updike. Henry Bech, an exquisitely blocked author, returns, marries and almost accidentally produces a best-seller in one of Updike's most adroit and lively comic performances.

The Collected Stories by Isaac Bashevis Singer. The Nobel laureate chooses 47 tales of demons, dybbuks and exuberantly flawed men and women, set mainly in his native Poland and his adopted Manhattan.

The Dean's December by Saul Bellow. In a tale of two cities, Bucharest and Chicago, another Nobelist meditates on the dual natures of freedom and totalitarianism.

Dinner at the Homesick Restaurant by Anne Tyler. The family that dines together declines together in this bittersweet novel of a brave and eccentric Baltimore household.

NONFICTION

Bronx Primitive by Kate Simon. A leading travel writer voyages back to her childhood for an unsentimental assessment of immigrant life and her coming of age in New York, circa 1920.

Isak Dinesen by Judith Thurman. Karen Blixen, a modern Scheherazade, lived as a baroness in Denmark and a farmer in Africa; along the way she produced haunting stories, none more complex and intriguing than the one of her own life.

Late Innings by Roger Angell. Baseball's unofficial scorer replays five turbulent seasons and still finds plenty of warm memories in the summer game.

Poets in Their Youth by Eileen Simpson. The first wife of the late John Berryman looks back at the years she spent among a brilliant and damaged generation of poets.

The Last Kings of Thule by Jean Malaurie. An Arctic adventurer in the tradition of Peary, Cook and Rasmussen poignantly describes the lives of Greenland's Eskimo nomads as the 20th century encroaches on their Sahara of ice and snow.

Books

nearby pool, and then mentions in passing: "Allies enter Berlin—Hitler dead in Bunker—Mussolini killed by Partisans." News of atomic bombs over Japan a few months later gives the twins identical nightmares: "That their bed-curtains had caught fire, that their hair was on fire, and their heads burned down to smoldering stumps."

Their dream is antipodal, embodying the horrors of all that they have been spared. And their story, as Chatwin constructs it, is an oblique commentary on the times of their lives. Posterity, should there be any, may well look back on this century as the time of displaced masses, victims of revolutions that threatened to set them free. The story of two brothers leading quiet lives in a changeless pocket of the world is a still point within the center of the chaos. Chatwin evokes a time of homelessness through the story of those lucky enough to stay home. —*By Paul Gray*

Neighbors

SHILOH AND OTHER STORIES
by Bobbie Ann Mason
Harper & Row; 247 pages; $12.95

The fine stories in Bobbie Ann Mason's first collection are set mostly in western Kentucky, where her characters inhabit a "ruburb," an area no longer rural but not yet suburban. Times are changing, and bonds are loosening. Old farmers sell out and head for Florida in brand-new campers; the congregations of small country churches are dwindling; Trappist monks are admired for not putting preservatives in their bread; and a disabled truck driver passes the time needlepointing a *Star Trek* pillow cover while his wife lifts weights. A story that begins "Leroy Moffitt's wife, Norma Jean, is working on her pectorals" is a story whose second line is guaranteed to be read.

Bobbie Ann Mason

Pocketknives and long, low dogs.

Mason, 42, grew up near Paducah, Ky., and she gets the details of transition right. "Who bought these 'toes'?" says one senior citizen. "He would no longer say 'nigger toes,' the old name for the chocolate-covered creams." Unlike some writers who have moved up, Mason does not bury her past in ironic disdain. A woman who identifies a long, low dog as a "datsun" gets the same neighborly attention as a pastor's wife who plays electronic games rather than attend one more workshop like Christian "marriage enhancement." In true short-story tradition, the insights and epiphanies are spring-loaded. A rock group called the B-52s sounds like "a crazed parent abusing a child, thrashing it senseless." A wife realizes that her husband is afraid of women and feels "so sick and heavy with her power over him that she wants to cry."

Mason has an unwavering bead on the relationship between instincts and individual longings. Her women have ambitions but never get too far from the nest; her men have domestic moments but spend a lot of time on wheels. Ruby's lover, Buddy Landon, an itinerant hounddog and pocketknife trader, gets to town every third Monday. His pickup truck in Ruby's driveway is "as startling as the sight of the 'Action News' TV van." And she hopes the neighbors will take it as a sign of her modern outlook. Sabrina, 20, has a small part in a regional production of *Oklahoma!* Edwin, the man she lives with, is 43 and drives a bus for retarded adults whom he entertains with music tapes and disc-jockey patter.

In "A New-Wave Format," the story of Sabrina and Edwin, Mason rarely says more than is necessary to convey what Hemingway called "the real thing, the sequence of motion and fact which made the emotion." Sabrina's enthusiasms, her fennel toothpaste and herbal deodorant, leave Edwin amazed and uneasy. Self-knowledge comes hard. He dimly recalls his knockabout past and realizes that he has not been an adventurer but "has gone through life rather blindly, without much pain or sense of loss." Only on his bus is he in complete control, jolting his handicapped audience with Jim Morrison's *Light My Fire*, "a song that was so long it carried them from the feed mill on one side of town to the rendering plant on the other." When Sabrina suggests marriage and adds that she will keep her maiden name, Edwin is at a loss for thought and feeling.

But not Bobbie Ann Mason. With intelligence, technical mastery and literary tact, she makes an unsettling point: when the cult of life-styles and celebrity junk-think crack the rectitude of western Kentucky, there must be a lot of people everywhere who are having a hard time feeling at home at home. —*By R.Z. Sheppard*

Milestones

RECOVERING. Nancy Reagan, 61, after a small growth on her upper lip was excised and diagnosed as basal-cell epithelioma, a curable form of skin cancer. The First Lady, who joked with her staff about her "stiff upper lip," will wear a small bandage for a few days.

DIED. Leonid Kogan, 58, slight "aristocrat of the violin," cherished by worldwide audiences for his poker-face pyrotechnics and the silken refinement of his playing; of causes and in a location not announced by Soviet officials. A prodigy who burst into the international spotlight at age 27 by winning the 1951 Queen Elisabeth Music Competition in Brussels, Kogan's flawless but aloof technique could on occasion produce bloodless interpretations. A Jew who denied that Moscow was guilty of anti-Semitic discrimination, he publicly criticized dissidents like Andrei Sakharov.

DIED. Jack Webb, 62, actor and alter ego of steely, deadpan Sergeant Joe Friday ("Just the facts, ma'am") on *Dragnet;* of heart disease; in West Hollywood, Calif. A self-styled "demon at work" who directed and produced most of the episodes both on radio (1949-56) and during two TV runs (1951-59, 1967-70), Webb continued to produce movies *(The D.I.)* and TV series *(Adam-12, Emergency!).*

DIED. Dwight Macdonald, 76, contentious cultural watchdog who wryly tilted against both philistinism and pretension; in New York City. Educated at Exeter and Yale, Macdonald wrote for FORTUNE from 1929 to 1936. His intellectual life was an odyssey: he was a Trotskyite who opposed World War II and singlehanded ran the pacifist-leftist journal *Politics* (1944-49). Next he declared himself a "conservative anarchist" and in his last major political stand supported the antiwar movement of the '60s. A fastidious critic, he graced *Esquire* and *The New Yorker* with sometimes highhanded pronouncements about movies, books and overblown fads. Observing in a 1960 essay that "the Lords of Kitsch sell culture to the masses," Macdonald famously defined and deflated the tastes of Masscult and Midcult in the U.S.

DIED. Lawrence Hoyt, 81, entrepreneurial book merchandiser who pushed best-sellers more than good writers, turning a chain of department store penny-a-day rental libraries he co-founded in 1932 into Waldenbooks, the nation's largest chain of booksellers with 800 splashy, look-alike retail outlets; in Bridgeport, Conn.

DIED. Arthur Rubinstein, 95, elegant concert pianist; in Geneva *(see* MUSIC).

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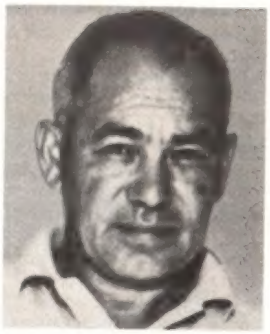
when I planned to **retire before fifty**

this is the business that made it possible

a true story by John B. Haikey



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"Not until I was forty did I make up my mind that I was going to retire before ten years had passed. I knew I couldn't do it on a salary, no matter how good. I knew I couldn't do it working for others. It was perfectly obvious to me that I had to start a business of my own. But that posed a problem. What kind of business? Most of my money was tied up. Temporarily I was broke. But, when I found the business I wanted I was able to start it for a small amount of borrowed money.

"To pyramid this investment into retirement in less than ten years seems like magic, but in my opinion any man in good health who has the same ambition and drive that motivated me, could achieve such a goal. Let me give you a little history.

"I finished high school at the age of 18 and got a job as a shipping clerk. My next job was butchering at a plant that processed boneless beef. Couldn't see much future there. Next, I got a job as a Greyhound Bus Driver. The money was good. The work was pleasant, but I couldn't see it as leading to retirement. Finally I took the plunge and went into business for myself.

"I managed to raise enough money with my savings to invest in a combination motel, restaurant, grocery, and service station. It didn't take long to get my eyes opened. In order to keep that business going my wife and I worked from dawn to dusk, 20 hours a day, seven days a week. Putting in all those hours didn't match my idea of independence and it gave me no time for my favorite sport—golf! Finally we both agreed that I should look for something else.

"I found it. Not right away. I investigated a lot of businesses offered as franchises. I felt that I wanted the guidance of an experienced company—wanted to have the benefit of the plans that had brought success to others, plus the benefit of running my own business under an established name that had national recognition.

"Most of the franchises offered were too costly for me. Temporarily all my capital was frozen in the motel. But I found that the Duraclean franchise offered what I had been looking for.

"I could start for a small amount. You can start a dealership for as little as $3,488. Another option is a $11,588 full cash investment, and if you qualify, Duraclean can work out financing for half this amount. I could work it as a one-man business to start, and operate from my home. No office or shop or other overhead, no salaries to pay. Equipment would fit in my car trunk. (I bought the truck later, out of profits.) Best of all, there was no ceiling on my earnings. I could build a business as big as my ambition and energy dictated. I could put on as many men as I needed to cover my volume. And I could build little by little, or as fast as I wished.

"So, I started. I took the wonderful training furnished by the company. When I was ready I followed the simple plan outlined in the training. During the first period I did all the service work myself. By doing it myself, I could make much more per hour than I had ever made on a salary. Later, I would hire men, train them, pay them well, and still make an hourly profit on their time that made my idea of retirement possible—I had joined the country club and now I could play golf whenever I wished.

"What is this wonderful business? It's Duraclean. And, what is Duraclean? It's an improved, space-age process for cleaning upholstered furniture, rugs and tacked down carpets. It not only cleans but enlivens and sparkles up the colors. It does not wear down the fiber or drive part of the dirt into the base of the rug as machine scrubbing does. Instead it *lifts out* the dirt by means of an absorbent dry foam.

"Furniture dealers and department stores refer their customers to the Duraclean Specialist. Insurance men say Duraclean can save them money on fire claims. Hotels, motels, specialty shops and big stores make annual contracts for keeping their carpets and furniture fresh and clean.

"Well, that's the business I was able to start with such a small investment. That's the business I built up over a period of eight years. And, that's the business I sold out at a substantial profit before I was fifty."

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Video

Traveling Light in Lilliput

Sony's wee Watchman makes viewing a moveable minifeast

"Good evening, this is your anchorman, Harry Hairspray, with the *Six O'Clock News*. Tonight's top story: VIDEO GOES VEST POCKET.

"You are no doubt wondering why my voice seems so tinny and my head is smaller than a peanut. That is because you have tuned in on the new Sony Watchman, the slender, hand-held TV set no larger than a walkie-talkie. Even at $349.95, Watchman was one of the hottest (and hardest to find) novelties in the stores this holiday season. Those mini-masters at Sony who shrank stereo music three years ago into the oft-imitated Walkman have scored again with this 19-oz. marvel and its 2-in. screen.

"The company has shipped all 10,000 of the Watchmans imported so far, and American distributors despair of getting enough to fill their back orders. Reason: the Japanese are buying the Lilliputian sets in such quantities (more than 5,000 per month) that the U.S. market remains on Sony's back burner. The company can use all the sales it can get. Profits for its most recently reported quarter fell sharply. Watchman is bound to help. 'Every piece we get we could sell 20 times,' says Sony's Miami-based Southeast regional manager, Barry Mitchell. In Dallas, Neiman-Marcus Merchandise Manager Robert Ackerman describes the Watchman as 'a sellout in every one of our 18 stores.'

"Even though I look very small, you will have noticed by now that my black-and-white image is sharp and clear whether you are using batteries or the plug-in adapter provided with the set. A number of small-screen TVs are now on the market, but none can match Watchman's remarkable compactness. The ⅝-in.-thick picture tube achieves its thinness through a significant technological twist. Instead of beaming electrons from some distance behind the tube face, as do conventional sets, Watchman's emitting gun rests alongside the tube and shoots the electrons across it. The picture is then pulled into view by powerful minimagnets.

ILLUSTRATION FOR TIME BY ELWOOD H. SMITH

"Sony plans to adapt this technology to large-screen formats. The dream—or the nightmare—of a TV set the size and thinness of a painting hanging on the living-room wall may soon be a reality. In fact, the West German firm of Siemens AG, using a different technology, has built a prototype 14-in. screen just 2.3 in. thick. The prototype will have a more immediate application as a computer accessory than as a home TV screen. But one slender advantage is already possible: the Siemens screen can be folded up for storage or transport.

"Meanwhile, Sony expects the Watchman to alter, or at least extend, any number of viewing habits. People can gaze at the gadget on the beach, carry it into stadium stands to catch instant replays, use it for soap-opera breaks while at school or work, or take it along on car trips. Predicts Warren Zorek, the manager of the consumer electronics department at Bloomingdale's in Manhattan: 'A color version should be on the way before too long, and it isn't farfetched to foresee hand-held video-game attachments and personal computer compatibility.'

"The portability of the Watchman, of course, is not without its dangers, especially for those who try to view it while driving a car or walking down the street. Jack A. Kapchan, a professor of psychology at the University of Miami, warns that 'Watchman will simply give those who are psychologically dependent on TV more access, producing distraction and more escape from reality.' And one final warning from me, Harry Hairspray. Please keep the children's gerbil away from the set. When you're this small, you must be careful. Good night, and have a tiny tomorrow." ■

The BEST OF 1982

Brideshead Revisited (PBS). Faithful, sometimes to a fault, to Evelyn Waugh's most popular novel, this visually ravishing series offered a lovely elegy to a time that never was. Eleven episodes that warmed an Anglophile's winter.

CBS Cable. An arts showcase that, in its 14 months on the air, presented some of the medium's finest theater *(Sizwe Banzi Is Dead)*, dance (Twyla Tharp's *Confessions of a Cornermaker)*, film *(The Tree of Wooden Clogs)*, music (a series on Broadway composers) and conversation (Gregory Jackson's *Signature*). After losing an estimated $30 million, it expired on Dec. 16—one of 1982's saddest death notices.

Donkey Kong (Coleco Industries Inc.). Video games continue to crowd TV programs off the family tube. This one, probably the best translation of an arcade game to home use, boasts bemusing graphics and the most congenial cast (savage ape, imperiled heroine, undaunted hero) this side of *Dallas*.

Late Night with David Letterman (NBC). Laid-back and amiably hip, Letterman presides over a menagerie of stupid pet tricks, oddball celebrities and the man with the worm farm. A lullaby for the eccentric insomniac.

Life On Earth (PBS). A tale of wonders, the saga of evolution and the ascent of life, from bacteria to man, lovingly told by British Host David Attenborough.

MTV (Warner Amex Satellite Entertainment Co.). Basically FM with pictures, MTV (Music Television) is a 24-hour cable service whose imaginative videotapes illustrating rock recordings expand TV's generally unadventurous visual vocabulary.

NBC News Overnight. TV's wittiest, toughest, least snazzy news strip. The late hour (1:30 a.m. E.S.T.) allows for lengthy and caustic reports, sutured by two droll, articulate anchors: Lloyd Dobyns (now succeeded by Bill Schechner) and Linda Ellerbee.

Police Squad! (ABC). The folks responsible for the hit movie *Airplane!* found TV a congenial medium to spoof cop shows with a bizarre deadpan wit. This superior sitcom came and went in six spring episodes; it should have stayed.

Roses In December (PBS). A taut documentary by Ana Carrigan and Bernard Stone about the killing of Jean Donovan, a lay missionary who worked with the Maryknoll nuns in El Salvador. An exemplary piece of humane film making that avoided political sentimentality and glib answers.

Sweeney Todd (The Entertainment Channel). Terry Hughes directed Stephen Sondheim's operatic musical for cable with seamless theater and TV technique. George Hearn was magnificent as Sweeney, the misanthropic cutthroat; Angela Lansbury was delectably deranged as his helpmeet.

80 years went into this Century.

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Official Car of the XXIIIrd Olympiad Los Angeles 1984

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